Gemini Control, 122 hours, 2 minutes. We've had no contact since the Canarvon station. We should be coming up on Hawaii in a very few minutes, and we are in that drifting configuration which is reminiscent of Gordon Cooper's earlier flight in Faith 7. He spent the better part of his flight in a drifting mode. Flight director is in a discussion with Jim McDivitt, Deke Slayton, and several other people around his console. John Hodge has come back, the Blue Team flight director. We generally have a fairly relaxed atmosphere here in the Control Center. This is Gemini Control.

END OF TAPE

This is Gemini Control Houston here, 122 hours 13 minutes into the Flight. Hawaii just lost signal as I started talking. We still have no word on the kinds of rates that the spacecraft is achieving in this drifting flight. We do expect some word on that as soon as it swings across the United States. Here is the Hawaii conversation.

Hawaii Cap Com	Gemini V, Hawaii Cap Com.
Cooper	Roger, Hawaii Cap Com. Gemini V here.
Hawaii Cap Com	Roger. For your power up configuration we'd like you to add the horizon scanner heater circuit breaker on.
Cooper	Ah, roger. For the power up configuration?
Hawaii Cap Com	That's the way you are now,
Cooper	Do you want the scanner heater circuit breaker on?
Hawaii Cap Com	That's affirmed.
Cooper	Roger, we have it on.
Hawaii Cap Com	All of your systems are go.
Cooper	Roger, Thank you.
Hawaii Cap Com	We're standing by.
Cooper	Okay, Hawaii Cap Com.

END OF TAPE

This is Gemini Control, Houston, here. We re over the Texas site and let's cut in on the conversation live.

Cooper and I saw Houston quite clearly.

Houston Cap Com Gordo, have you ever been able to see the Domed Stadium?

Cooper No, we didn't see the Domed Stadium the last time either.

Houston Cap Com Rog.

Cooper There are a number of small puffy clouds overhead, ... and then we are drifting at a fairly good rate here too. It doesn't give us a great long look at anything

Houston Cap Com Okay.

Cooper We just now passed Florida, I saw Florida.

Conrad Hey, one thing Jim I'd like you to consider on the last days worth of experiments. Fuel permitting, let's not load us too badly though because we are going to have quite a restowage problem, you know?

Houston Cap Com Right, I understand that. I set aside 3 hours prior to retrofire for our stowage and it took us just that long to do it. As a matter of fact, we were a little rushed at about 1 hour to go, we still had some things out, so I think 3 hours would be a good time to use there.

Conrad That was our feeling, that we needed at least 3 hours.

Houston Cap Com — Well, don't worry about that. We won't load you up so that you can't get all the stuff stowed.

Conrad — Very good.

Conrad — We're right over Key West now and it's a really nice day down there too.

Houston Cap Com — Roger.

Conrad — I saw the airfields in Key West.

Houston Cap Com — Have you ever noticed the Gulf Coast and the Atlantic Coast outlined in those little puffy clouds like we saw?

Cooper — Yeah, there it is right now.

Houston Cap Com — That's really classical weather, isn't it?

Cooper — Yeah, it sure is.

Cooper — You can also see a big, sort of a storm right down off the tip of Florida in the Gulf.

Houston Cap Com — Rog. Say. Were you ever able to see the eye of "Doreen" or does it just look ...

Cooper — Yeah, we took some pictures of it.

Houston Cap Com — Does the eye actually look like an open spot, or is it just all clouded over

Cooper — It's like a semi-opened pot and built up very, very heavy, and then right in the immediate eye of it, it was sort of like a sunken in place, like a convex.

Houston Cap Com — Very good. All the stuff we passed over was just flat and you could never really pick out any center to them.

Cooper — This one had a very well defined eye.

Houston Cap Com — Rog.

Cooper — It looked like the center of a whirlpool, you know?

Houston Cap Com — Roger.

Conrad — Say, Jim. Would you give my wife a message.

Houston Cap Com — I'd love too.

Conrad — Tell her she owes me a dollar.

Houston Cap Com — Okay, I'll tell her that. You want to collect it yourself, or do you want me to mail it to you.

Conrad — No, I'll collect it. I just want you to tell her, that's all.

Houston Cap Com — Okay.

Houston Cap Com — Hey, Dr. Berry says that she has already called up and admitted she owed you a dollar.

Conrad — Very good.

Conrad — I got a good look at the Guantanamo Naval Base down here in Cuba.

Houston Cap Com — Very good.

Houston Cap Com — Gemini V, Houston again. Have you been able to see anything of Australia yet in the daylight?

Houston Cap Com — Gemini V, Houston. Have you been able to see Australia in the daylight yet?

Houston Cap Com — Gemini V, Houston.

Cooper — Go ahead Houston. Gemini V.

Houston Cap Com — Dr. Berry said yesterday at the Press Conference that after the use of your blue bags when you get back, we'll have a real milestone.

Cooper Correct.

Conrad I'm really keeping my eye on Gordo, I'll say that.

Houston Cap Com So would I, Pete. So would I.

Gemini Control here. We apparently are out of the voice contact zone. Just as we tuned in on that live conversation across the United States, we established here on the ground that we were achieving in drifting flight rates in pitch of about 2 to 3 degrees and slightly less than that in roll. So, the spacecraft is drifting along at a very stable sort of position. This will let the crew continue with what kind of photography they can acquire on a when you can basis. We heard quite a discussion of the weather and the conversation also cleared up, phone call that Dr. Berry got from Jane Conrad about an hour ago. And we presume Mrs. Conrad might have more to say on that. This is Gemini Control at 122 hours 35 minutes.

END OF TAPE

Gemini Control, Houston; 123 hours, 2 minutes into the mission. Spacecraft is on its 78th revolution around the earth, and our orbital elements today are 123 statute miles, perigee, 187 statute miles, apogee, period of about 95½ minutes. The next perigee will occur over Guaymas at a point 115, 115 degrees west longitude. The perigee moves back about 22 degrees per rev. Everything's status quo here, no contact since the State-side pass. This is Gemini Control.

END OF TAPE

Gemini Control here; 123 hours, 33 minutes into the flight. We are on the 78th rev in mid-Pacific. Here in the Control Center the flight director has been chatting with Techland Roberts. Tech was our first flight dynamics officer back in the Mercury program. It's been a relatively quiet swing across the Pacific. The spacecraft was acquired by Canarvon, although it was more than a thousand miles from the station. We have that conversation and will play it for you now.

Canarvon Cap Com	Gemini 5, Canarvon Cap Com.
Conrad	Come in, Canarvon, Gemini 5.
Cooper	Our status is green up here.
Canarvon Cap Com	Roger. Looks good down here also. We've got about .....LOS, standing by.
Conrad	Roger. Canarvon Cap Com, is the Surgeon listening?
Canarvon Cap Com	He's listening.
Conrad	Would the Surgeon pass on from the pilot to doctors Bishop, Wade, and Murray Austin our regards, please?
Canarvon Cap Com	Roger. Will do.
Conrad	Thank you.
Canarvon Cap Com	We'll see you tomorrow.
Conrad	OK.

END OF TAPE

Gemini Control here, 123 hours 47 minutes into the mission. We have some tape from Hawaii medical data pass for you in which Cooper reads out his water usages and sleep cycle. Earlier, over Carnarvon, you heard Pete Conrad convey his best wishes to Doctors Bishop Laine and Murry Austin. Those gentlemen are members of the Royal Australian Air Force, but they are working as medical monitors at the Carnarvon station. Pete met them during the GT-3 flight, the Grissom and Young flight. Cooper, the Command Pilot also has had some experience at the Carnarvon Station. He was the Capsule Communicator there during the John Glenn flight. We have the Hawaii pass ready for you and we will play that conversation for you at this time.

Hawaii Surgeon — Have a valid temperature, standing by for blood pressure.

Hawaii Surgeon — Gemini V, Hawaii Surgeon. Your cuff is full scale.

Hawaii Surgeon — Gemini V, we have a valid blood pressure. Give me a mark when you begin your exercise.

Cooper — Mark.

Hawaii Surgeon — Gemini V, Hawaii Surgeon. Your cuff is full scale.

Hawaii Surgeon — Gemini V, Hawaii Surgeon. Your cuff is full scale.

This is Gemini Control. We cut off the tag end of that Hawaii pass because we have a little surprise for the crew. Some music they requested earlier in the day. Jim McDivitt just advised that they are playing. Let's all listen to it. (The music begins to play).

Jim McDivitt — May I have this dance please?

Conrad — That sounded good.

Houston Cap Com — How do you like that GT-V. Gemini V, Houston here. I've got some switching positions that I would like to have you go to. You don't have to acknowledge this. We'd like to have you put your cryogenic gauging switch to ECS O_2.

Houston Cap Com — Gemini V, Houston here. We'd like to have you put your cryogenic gauging switch to ECS O_2.

Houston Cap Com — Oh, you're up. How did you like the music.

Conrad — It was great!

Houston Cap Com — Listen, as soon as we get through some of the switching here, we'll give you some more.

Conrad — Okay.

Houston Cap Com — How are your rates up there now?

Cooper — Oh, about 3 degrees, I guess.

Houston Cap Com — Okay, your cryogenic gauges to fuel cell O_2. Okay, now we'd like to have you go to fuel cell H_2.

Cooper — Okay, we get particles going by fairly frequently, so I think we are still venting.

Houston Cap Com — Okay, you say things are going by quite often so you think you are still venting, right?

Cooper — Roger.

Houston Cap Com — Okay, put your cryogenic gauging switch back to off. Be advised that it may be possible for you to get another fix on the storm "Doreen".

Cooper Okay.

Houston Cap Com On rev 79 at approximately 19 25 00, the center of the storm should be a little bit to the right of your track or possibly directly below the spacecraft, and if you can get a fix, we would like to have the time that you passed over it, and where you thought the center of the storm was with respect to you.

Cooper Okay. We'll try.

Houston Cap Com Gemini V, do you have anything else for Houston.

Cooper No, I don't believe so.

Houston Cap Com Okay, if you don't have anything else, we'll give you the music again, Okay.

Cooper All righty.

Houston Cap Com Here we go. Let's have some music, Contact.

MUSIC BEGINS TO PLAY AGAIN

Gemini Control here. That apparently concludes our space concert for today. The tunes you heard were in this order: Muskrat Ramble, Birth of the Blues, Jada, and most appropriately, When the Saints Go Marching In. There has been consideration here given to playing "Never on a Sunday," was ruled out as inappropriate. The tunes, of course, were very much in keeping with the city that they were flying just to the south of, all New Orleans type music. Both had expressed a preference for Dixie Land before taking off. This is Gemini Control at 124 hours 4 minutes into the mission.

END OF TAPE

Gemini Control here; 124 hours, 32 minutes into the flight, and things have been all quiet in the Control Center since our State-side pass. when Jim McDivitt qualified as the first space disc jockey. We should explain that the music was played up there through Jim's console. He had to squeeze down his push-to-talk button to keep it fed up there, just the reverse of the situation about 3 months ago when Ed White was out on the end of a line and Jim, of course, was keying so that the conversation flowed the other way. For the record, the music was that of Al Hirt. That's it, things are all quiet here in the Control Center. The flight director is on a luncheon break. When he leaves his console, assistant Flight Director Bill Platt takes over. Up in space, the pilot should be taking a nap now, and the command pilot is due for another meal. They are coming up on Tananarive very shortly. At Canarvon the crew will get some up-dates on planned landing areas, 81 through 85, and that's our status at 124 hours and 33 minutes into the flight.

END OF TAPE

Gemini Control here; 125 hours, 23 minutes into the flight. In a recent pass across the CSQ, Gordon Cooper noted a slight increase in his carbon dioxide sensor onboard the spacecraft, and this is accountable because the suit flow rate was slightly down and, as will be shown on the tape, people here were very happy in that the carbon dioxide sensor is delicate enough to pick up this slight change in the carbon dioxide element. We have talked to Doctor Berry, and his comment on the status of the pilot goes like this: They are in excellent shape. He says the EKG's, the heart rates, are as clean as any data he has seen during the flight during these last few passes, particularly over Hawaii. He says the intervals he sees in the EKG's are precisely what they were just prior to lift-off. He is very pleased. Gordon Cooper has reported the spacecraft rates are presently about 6 degrees and tumbling. At this time the spacecraft is approaching the west coast of the United States. During this period the crew will align the platform and will pulse mode fire for about one second each that number 7 and number 8 thruster that was giving us trouble earlier in the day, not use them for pass 5 to 6 hours. They do plan to fire them to see how everything works out. Meanwhile let's have the tape from the earlier CSQ pass.

CSQ Cap Com — Gemini 5, CSQ Cap Com

Cooper — Roger, CSQ Cap Com. Gemini 5 here. Over.

CSQ Cap Com — Roger, Gemini 5. We would like you to place your cam switch to real time ac-aid for this one, please.

Cooper — OK.

CSQ Cap Com — And CSQ has a mock up-date for you. Let me know when

Gemini Control, Houston here; 125 hours, 10 minutes into the flight. We're on the 79th rev, coming across the Pacific Ocean. The capsule communicator aboard the Coastal Sentry Quebec is in contact with the spacecraft now. They've just been given a whole long series of up-dates for various planned landing areas, 81 through 85, as a standard procedure. The, of some interest may be the pressure and quantity readings on our various tanks. The environmental control system breathing oxygen supply, we're showing 76.9 percent of the mass quantity. The pressure is 1,020 and venting slightly. The fuel cell oxygen supply shows 86.7 percent quantity, and we're showing the pressure on that oxygen supply to the fuel cell of 173 pounds per square inch. The fuel cell hydrogen quantity is 40.7 percent and the pressure is 349 pounds per square inch and venting slightly. At last reading we were drawing onboard a total of 14.8 amps and a voltage of 26.8. Earlier, several revolutions earlier, you recall that Pete Conrad said that he thought he saw a carrier and a destroyer entering Jacksonville harbor. Checking back with the authorities at Jacksonville, we believe that carrier and destroyer turned out to be a tug pulling a large barge, which might have been easily interpreted as a carrier and a destroyer to a Navy pilot like Pete Conrad. This is Gemini Control.

END OF TAPE

you are ready to copy. Over.

Cooper — Stand by. We're ready.

CSQ Cap Com — Roger. 81-3 [illegible] 52 20 143719101, 82-3 23273... 13 plus 22, 18 plus 35, 83-3 010252, 12 plus 19, 17 plus 53, 84-Bravo 023841, 11 plus 34, 17 plus 45, 85 Delta 032755, 19 plus 36, 24 plus 40, do you copy?

Cooper — Roger.

CSQ Cap Com — OK. Be advised the weather is good in all areas and at standard neck angles. Over.

Cooper — All right, the weather is good at standard neck angles.

CSQ Cap Com — And also be advised if your delta P lights on section 2 come on, you should go to the cross over momentarily. Over.

Cooper — Say again.

CSQ Cap Com — Roger, if your delta P lights come on on section 2, you should open a cross over valve momentarily. Over.

Cooper — OK, will do. And would you pass back to MCC that we just had one minor little difficulty, and we think it's all right, but they might just be aware of it. Our partial pressure CO_2 gauge started sliding, and we increased the suit flow and decreased the suit temperature and suit flow, and the gauge went back down, and we have run a P CO_2 tape test on it which shows that it is below four millimeters of mercury, and the gauge is presently back down to the zero point, but they might just want this for informational

purposes.

Houston Cap Com — We copy.

CSQ Cap Com — All right on copy.

Houston Cap Com — What did he say the P CO_2 got up to?

CSQ Cap Com — He didn't say how far it rose,....

Houston Cap Com — Ask him.

CSQ Cap Com — .... it went to 4 millimeters he said, I believe.

Houston Cap Com — Ask him, will you please?

CSQ Cap Com — Roger. Gemini 5, CSQ here.

Cooper — Go ahead, CSQ.

CSQ Cap Com — Roger. Flight would like to know how far the CSQ rose.

Cooper — When we started it was just above 1 millimeter of mercury, just above one tenth of a millimeter of mercury.

CSQ Cap Com — One tenth of a millimeter.

Cooper — Right. It's been riding right off the bottom of the peg, so this is quite a change.

CSQ Cap Com — Roger. Copy.

Houston Cap Com — Sounds pretty normal.

CSQ Cap Com — Did you copy, flight?

Houston Cap Com — Roger. That sounds normal to us.

CSQ Cap Com — Roger.

Gemini Control here again. Coming right behind it we do have the Hawaii discussion. It's racked up, we'll play it for you now.

Hawaii Cap Com — Gemini 5, Hawaii Cap Com.

Cooper Go ahead, Hawaii, Gemini 5.

Hawaii Cap Com Roger. We'd like to run a test on thruster 7 and 8. We'd like you to bring up the ACME and the pulse control mode and stabilize with your davenport to the sun.without using your yaw twisters.

Cooper OK. ...

Hawaii Cap Com OK, we'd like you to fire the thrusters 7 and 8 in the direct control mode for about 1 second each, and evaluate the performance.

Cooper OK.

Houston Cap Com At Guaymas we'd like him to do that.

Hawaii Cap Com We'd like you to do that at Guaymas.

Cooper You want us to do that at Guaymas?

Hawaii Cap Com That's affirmative.

Cooper OK, fine.

Hawaii Cap Com OK, and as soon as you finish your evaluation, we'd like you to power down again.

Cooper OK.

Hawaii Cap Com All of their systems look good, flight.

Houston Cap Com Roger.

Cooper We still apparently....quite a bit, because our drift rate has gotten up to around 6 degrees per second in that top one.

Hawaii Cap Com Roger.

Gemini Control here. In the course of this swing off the west of Mexico,

we have attempted a latitude control check, and results were negative. We tried in the pulse command mode, we then tried in the rate command mode, that's on thrusters and upper seven, and 8 yaw left thrusters. We got zero thrust out of both. Pete Conrad reports that they did fly directly over the storm Doreen. He identifies the time, and we have that tape ready for you and we'll play it now.

Gemini Control again. I'm sorry, we apparently missed a cue there. They were not quite ready with the tape. When they are--I am advised they are ready now. Let's have the tape.

Cooper — Go ahead, Houston. This is Gemini 5.

Houston Cap Com — Roger. Have you started to slow down your rate now and to stabilize with the adapter towards the sun?

Cooper — No, we're just starting.

Houston Cap Com — OK, very good. We'd like to have you turn on your TN at 1926. ....real time on acquisition right now. We'd like to have you turn it back to command at 1934, if we haven't told you to do by then.

Cooper — OK.

Houston Cap Com — What do you think of those tumbling rates that you've got now. We'd like your opinion of them.

Cooper — Well, they are getting up a little bit high... They aren't too bad yet.

Houston Cap Com — OK. What are you thinking you'll live with? About

twice that much, or 50 percent more, or a little bit more, or what?

Cooper — Just a second we're damping.

Houston Cap Com — OK. How are those other thrusters working, Gordo?

Cooper — They seem to be working all right.

Houston Cap Com — Very good.

Conrad — Do you want these altogether or one at a time?

Houston Cap Com — We want them one at a time, and we want you to thrust for about one second on each one, and we want your evaluation fo their performance, but we'll call you and tell you when we get good TM. We'd like to watch that TM also.

Cooper — OK.

Houston Cap Com — Guaymas, do you have TM.

Guaymas Cap Com — That's affirmative, flight.

Houston Cap Com — OK, Gemini 5, this is Houston. We'd like to have you go ahead and operate one of the thrusters in direct, and you tell us which one you are doing.

Cooper — All right number 7 is on, and I'm thrusting on my mark, 3, 2, 1, 1, no joy.

Houston Cap Com — Roger, no joy. We'd like to have you do it on number 8 now please.

Cooper — All right, number 8 is on. I'm thrusting now, 3, 2, 1, mark. No joy.

Houston Cap Com — Roger, no joy on that one either. We'd like to have you go to rate command and try rate command

now, Gemini 5, in yaw left.

Cooper — Roger. Number 8 is on now. Negative in rate command.

Houston Cap Com — OK, try 7.

Cooper — Number 7 is on now. And there is nothing in number 7.

Houston Cap Com — OK, you can go ahead and power back down. We'll think some more here.

Cooper — All righty.

Houston Cap Com — Don't forget to turn your TM off. Just a second, let's see if we need anymore. OK, leave it on for another couple of minutes and I'll give you a call.

Cooper — OK.

Guaymas Cap Com — Flight, Guaymas.

Houston Cap Com — Go ahead, Guaymas.

Guaymas Cap Com — Be advised that acquisition had a steady light, I was getting a reading from the back room on both those thrusters as on. They never did go off, and they stayed on and they are on at this time.

Cooper — Houston, Gemini 5.

Houston Cap Com — Go ahead.

Conrad — We passed Doreen 192445 20 miles north of track.

Houston Cap Com — Roger, 192445 29 miles north of your track. Guaymas, Guaymas would you check that?

Guaymas Cap Com — Check it again, flight. Stand by.

Houston Cap Com — Gemini 5, Houston. We'd like to verify that the circuit breakers went on, and stayed on when you

placed them up to the on position.

Cooper — Yes, they were and they stayed on.

Houston Cap Com — OK.

Guaymas Cap Com — Flight, Guaymas.

Houston Cap Com — Go ahead.

Houston Cap Com — They should be on now, but they should have gone off. when you turned the circuit breakers on.

Guaymas Cap Com — That is negative.

Houston Cap Com — After the pass, how about playing your tape back.

Guaymas Cap Com — Will do, flight.

Houston Cap Com — Cut some main A and B summaries for us.

Guaymas Cap Com — Roger. Are the circuit breakers closed at this time?

Houston Cap Com — Stand by. I think that the circuit breakers are both off at the present time. Gemini 5, Houston. Are both your circuit breakers open at this time?

Cooper — Roger. Circuit breakers 7 and 8 are open at this time.

Houston Cap Com — OK. Very good.

Cooper — We are reading 42 percent on fuel cell hydrogen at the present time.

Houston Cap Com — Roger, understand, 42 percent on fuel cell hydrogen.

Cooper — Roger.It's gone down 52 42 since we talked to you last.

Houston Cap Com — OK.

Guaymas Cap Com — Flight, Guaymas.

Houston Cap Com — Go ahead.

Guaymas Cap Com — They are both on.

Houston Cap Com — Roger. Gemini 5, this is Houston. You can put

your TM switch back to command now.

Cooper OK, I'm back in command.

Guaymas Cap Com LOS Guaymas .

Houston Cap Com Roger.

END OF TAPE

Gemini Control Houston, 126 hours 2 minutes. At this time the Eugene Kranz Flight Control Team has come in the Control Center and we are in the usual between shift briefing process at each console. Eugene has been here for about half an hour. He has been in detailed discussions with Chris Kraft on the events of today. Otherwise, we've not had a report from the spacecraft since the Guaymas pass. The Pilot, Pete Conrad, is to have a meal starting in about 10 minutes after Tananarive. Then over Hawaii, they will perform another hydrogen and oxygen fuel cell section 1 and 2 purge. This is Gemini Control.

END OF TAPE

This is Gemini Control after 126 hours and 32 minutes of flight by spacecraft Gemini V. Spacecraft Gemini V is now on its 80th revolution over the Earth and it is moving out over the Pacific and will shortly pass over the Coastal Sentry Quebec, our tracking ship located south of Japan. Here in the Mission Control Center, the White Team of Flight Controllers have moved into the building and will soon be manning the consoles. The Red Team is going off duty. At this point in our flight, Spacecraft Gemini V is in drifting flight. We have been briefed that yaw thrusters 7 and 8 are not functioning and the spacecraft is in drifting flight through the end of its mission from now until it completes its mission. This is Gemini Control at 126 hours 32 minutes.

END OF TAPE

This is Gemini Control at 128 hours and 2 minutes into the flight of Spacecraft Gemini V. The spacecraft is now in it's 81st revolution over the earth and at the present time it's over the country of India and will shortly be moving into the Pacific to make another pass over the Coastal Sentry Quebec, our tracking station located there. Over the Rose Knot Victor, the tracking ship off the West Coast of Peru, Pete Conrad, who is now awaken from his sleep period gave the report on the status of experiments performed recently aboard the spacecraft. At this time, Command Pilot Gordon Cooper is scheduled to sleep. We will now play back the voice tape transmission between the spacecraft Gemini V and the Rose Knot Victor tracking ship.

RKV Cap Com — Gemini V, RKV Cap Com.

Cooper — Go ahead RKV, Gemini V.

RKV Cap Com — Roger. Your systems are all green and go on the ground.

Cooper — Okay, we're all green here.

RKV Cap Com — Roger. We'd like to confirm that your OAMS heater circuit breaker is closing.

Cooper — That's Charlie, it is closing.

RKV Cap Com — Good. We'd like an experiment status from you this pass.

Conrad — Okay, ready to copy?

RKV Cap Com — That's right.

Conrad — The experiments that we have done are 05 21 00 00, UHF test number 1, 2, 3, and 6 complete. D-1, sequence 1, 2, and 3 complete. D-2, nothing. D-6, 72 pictures, D-4, D-7 in the following sequence are complete, 405, 408, 409, 410. Still copying?

RKV Cap Com — Roger.

Conrad — 410A, 410B, 411, 414, 420, 422, 423A, 423B, 424A, 425A. On D-4, D-7 we have 16 minutes of record time left.

RKV Cap Com — 16?

Conrad — That's affirmative. SAD-13, we have completed to date all onboard flight plan tests.

RKV Cap Com — That's good.

Conrad — On S-1, it is complete. On S-5/6, we have taken 3 magazines worth, we have over 210 pictures. On S-7, we've taken 23 pictures which includes 8 groups of clouds, one of the calibration card picture. The M-1 experiment, broke. It's zero power plus 00 plus 00, plus 00, give or take a couple of hours.

RKV Cap Com — What was the number of that one again?

Conrad — Say again?

RKV Cap Com — Which experiment was that?

Conrad — The M-1.

RKV Cap Com — Roger.

Conrad — The M-3 exerciser has only been used when appropriate by the Pilot. The Command Pilot has used it as many times as ..... (garbled).

RKV Cap Com — Good.

Conrad — The MSC-1 has been done once on day 1, once on day 3, once on day 4.

RKV Cap Com Roger.

Conrad On the Apollo landmarks, we've photographed 207, 208, 212, 213.

RKV Cap Com Good.

Conrad Cabin lighting, 4 surveys.

RKV Cap Com Say again?

Conrad On the cabin lighting, we have run 4 surveys.

RKV Cap Com Good.

Conrad On the humidity sensors we have at least one reading per day.

RKV Cap Com Good.

Conrad Millimeter camera, we've taken 1 and a quarter magazines. We have 2 and three-quarter magazines left. With regard to remarks, the P6 are almost out of film. 3401. Do you read?

RKV Cap Com Rog.

Conrad That's it.

RKV Cap Com Okay. What size of film were -- did you give me where you had 2 and three-quarters magazine left?

Conrad 16-mm.

RKV Cap Com Rog. Thank you.

Conrad We've also taken about 50 S-5 and 6 photographs with the extra 35-mm film pack.

RKV Cap Com Roger.

RKV Cap Com — Okay, could you give me the scores on your vision test?

Conrad — Okay. I'll get you one here. It was only one that that you haven't got.

RKV Cap Com — Okay.

Conrad — Okay, last night they are at 05 days, 08 hours, 40 minutes. The Command Pilot had ten wrong. And on test M-9, his scores were 95, 95, 94, 96, 96.

RKV Cap Com — Good, good.

Conrad — On the Pilot, the SAD-13 were 6 wrong, and 9 scores were 95, 93, 92, 98, 98.

RKV Cap Com — Good.

RKV Cap Com — We'd also like to get an evaluation of the -- on this mode of failure on the tape recorder. And approximately what time it happened?

Conrad — We don't have any idea of what time it happened because we just realized that we had done a lot of talking on the tape and hadn't gotten a record light. and it should not blink.

RKV Cap Com — Roger, understand.

RKV Cap Com — Houston Flight, RKV Cap Com.

Houston Flight — Go, RKV, Houston here.

RKV Cap Com — Do you have anything else for us, everything looks real nominal on this pass.

Houston Flight	Could we have another alpha summary please?
RKV Cap Com	Roger, will d
RKV Cap Com	Gemini V, RKV Cap Com. We have nothing else for you. We'll be standing by.
Conrad	Thank you.

END OF TAPE

This is Gemini Control at 128 hours and 32 minutes into the flight of spacecraft Gemini 5, which is now on the 81st revolution over the earth and has just passed out of voice range of our Hawaiian tracking station. While over that station, Pilot Pete Conrad carried on a voice conversation with Bill Garvin, the spacecraft communicator aboard, at the Hawaiian tracking station. After giving some read-outs on the fuel system, Bill Garvin, the spacecraft communicator at Hawaii, reported to Mission Control Center at first that all systems looked good from the ground. He then asked Pete Conrad, "How are your rates doing?" Conrad said, "The rates are running about 6 percent per second and on one axes, mostly pitch and a little yaw." Garvin asked him how he felt about these rates, and Conrad said, "They are all right." We had then a report that a delayed time telemetry was completed to the ground, and Conrad asked how much electrical power was indicated, what the indication of use of electrical power was in the spacecraft from the ground readings, and the response was--15 amps. We will now give you the play back of that taped voice conversation.

Conrad	Hawaii, Gemini 5, do you read?
Hawaii Cap Com	I read you loud and clear.
Conrad	The rates are about 6 degrees per second.
Hawaii Cap Com	Roger.
Conrad	That only on one axis.
Hawaii Cap Com	Which one?
Conrad	Well, the vehicle is tumbling, and it changes axes, but that's the big rotation.
Hawaii Cap Com	OK.
Conrad	It's mostly pitch, with a little yaw.

Hawaii Cap Com Roger.

Houston Cap Com Why don't you find out how he feels about those rates, Bill?

Hawaii Cap Com How do you feel about those rates, Pete?

Conrad Oh, they are all right.

Hawaii Cap Com They don't bother you?

Conrad Nope.

END OF TAPE

This is Gemini Control at 129 hours and 2 minutes into our mission. Spacecraft Gemini 5 at the present time is passing off the east coast of South America and back over toward the African continent. We had a pass over the Rose Knot Victor tracking ship just a few minutes ago. It was a very routine pass. The spacecraft communicator up-dated the flight plan and passed on the comment that all systems looked good. We have talked to Doctor Dwayne Catterson, our flight surgeon here in Mission Control Center, and he said that both crewmen are in excellent physical shape, and that Pete Conrad, at this time, sounds particularly good; of course Command Pilot Gordon Cooper is in a sleep period. In the MCC, Mission Control Center in Houston, we have some of the flight controllers taking advantage of a lull in the flight and are having a coffee break. This is Mission Control, Gemini Control at 129 hours and 3 minutes into the mission.

END OF TAPE

This is Gemini Control at 129 hours and 32 minutes into the flight of spacecraft Gemini V, which at the present time is passing over -- beginning to pass over India. Our next voice communication, we expect, will be made over the Coastal Sentry Quebec, as the spaceship passes that tracking ship in just a few minutes. At that time the spacecraft crew will be advised that there will be a medical data pass upcoming as it passes over the Rose Knot Victor some 30 to 40 minutes from now, and that is the only activity that is scheduled on this revolution. This is Gemini Control at 129 hours and 32 minutes into the flight of spacecraft Gemini V.

END OF TAPE

This is Gemini Control at 130 hours and 2 minutes into the flight of spacecraft Gemini 5. At the present time our spacecraft is passing south of Hawaii on the 82nd revolution around the earth. Over the CSQ which was underneath about 10 to 15 minutes ago pilot Pete Conrad was advised to delete the cabin light survey which was scheduled for that time; and he was also advised that he is scheduled to make a medical data pass to the Rose Knot Victor, our tracking ship off the coast of Peru, which will be coming up in approximately 15 minutes. At this moment we are 130 hours and 2 minutes into the Gemini 5 flight. We have the voice tape now between spacecraft Gemini 5 and the Coastal Sentry Quebec tracking ship located south of Japan.

CSQ Cap Com — This is CSQ Cap Com.

Conrad — Go ahead, CSQ. Gemini 5 here.

CSQ Cap Com — Roger. We have you go on the ground, and we'd like to advise you to delete the cabin light survey that was scheduled - the next scheduled one. We'd like a reading of the number of "heads up" and the number of "heads down" surveys you have taken.

Conrad — Well, so far, they're either heads up or tumbling.

CSQ Cap Com — Roger. Copy. Could you give me the number of each please.

Conrad — There's 2 heads up and 2 drifting.

CSQ Cap Com — Copy. And we'd also like to remind you that you have a medical data pass over RKV on the next rev at time 00 21 32. Over.

Conrad — 00 21 32.

CSQ Cap Com That's affirmative.

Conrad . . . flight data - our complete range now is 8 degrees.

CSQ Cap Com Copy. Range is now 8 degrees? Is that affirmative.

Conrad Affirmative.

CSQ Cap Com Roger. We have nothing further. Stand by.

END OF TAPE

This is Gemini Control at 130 hours 32 minutes into the flight of spacecraft Gemini 5 which is now passing over South America on the 83rd revolution around the earth. Just a few minutes ago, as the spacecraft passed over the Rose Knot Victor tracking ship, the pilot Pete Conrad made a medical pass including exercise which the flight surgeon aboard the Rose Knot Victor pronounced as good. The conversation between the Rose Knot Victor and the spacecraft was somewhat garbled on this end, and Pete Conrad was giving a water report - water intake report - we think he said 27 pounds and 6 ounces. We'll have to check this figure. The Rose Knot Victor also updated the spacecraft star map. This is Gemini Control 130 hours and 32 minutes into the mission. At this time command pilot Gordon Cooper is asleep.

END OF TAPE

This is Gemini Control at 131 hours and 2 minutes into the flight of spacecraft Gemini V. At the present time our spacecraft is coming up on the country of India on the 33rd revolution over the earth. We have had no voice communication with spacecraft Gemini V for a little more than 30 minutes, and at that time it was passing over the Rose Knot Victor, our tracking ship located off tne west coast of Peru. Here in the Mission Control Center our flight controllers are taking turns at a dinner break. A cafeteria has been set up in an adjoining room. During past flights this cafeteria was operated on a temporary or makeshift basis. Now, with spaceflights increasing in frequency, the cafeteria has been put on a more or less permanent operation. Controllers can get a hot meal complete with all the trimmings. Tonight's menu, stuffed pork chops, blackeyed peas, and a variety of salads. This is Gemini Control at 131 hours and 3 minutes into the mission.

END OF TAPE

This is Gemini Control at 131 hours and 32 minutes into the flight of spacecraft Gemini 5. Our spacecraft at the present time is passing over the Pacific Ocean, approximately over Canton Island on the 83rd revolution around the earth. A few moments ago we had a voice communication with the Coastal Sentry Quebec, our tracking ship located south of Japan. That station gave the spacecraft a go on the ground - from the ground. The pilots in cooperation with the tracking ship made a fuel cell purge and completed in same; and they were given some coodinates for a tropical depression which is in the Pacific; and they should come rather close to it and will try to make a visual observation. The tropical storm depression was west of Japan at 21 degrees north by 157 degrees east. At this time both crew members are awake and both took part in the conversation with the Coastal Sentry Quebec. However, the transmission voice quality was not too good from the spacecraft. This is Gemini Control at 131 minutes - 131 hours and 33 minutes into the flight.

END OF TAPE

This is Gemini Control at 132 hours and 2 minutes into the flight of spacecraft Gemini V. Our spacecraft has just started its 84th revolution over the earth. At the present time has just left the vicinity of the Rose Knot Victor off the west coast of Peru and is now approaching over the southern tip of South America. We had voice communication with the spacecraft on this pass. Spacecraft communicator Jim Fucci on the Rose Knot Victor gave Gordon Cooper some new data for possible landing areas. He added that the weather is good all around. He advised Cooper there will be a medical pass for him on the next revolution as they come over the Coastal Sentry Quebec. He asked Gordon Cooper if he had noted the storm that we had indicated was in the area as we were over the Coastal Sentry Quebec and Cooper added they did see the storm. It had a center eye. It appeared quite large and appeared to be on the buildup and building fast. This is Gemini Control at 132 hours and 3 minutes into the mission.

END OF TAPE

This is Gemini Control at 132 hours and 32 minutes into the flight of spacecraft Gemini 5 which is now passing over Africa on its 84th revolution over the earth. We have had no voice communication with the spacecraft since it passed over the Rose Knot Victor approximately 30 minutes ago. At that time Gordon Cooper reported that he had sighted the tropical depression or tropical storm that had been pointed out by our weather people at 21 degrees north and 157 degrees east. Gordon said that he had seen the eye of this storm - that it was quite large and was on the build-up. At the present time activity aboard the spacecraft is on the low side. We have a medical pass coming up on the command pilot over the Coastal Sentry Quebec which will be in approximately another 20 minutes, and that is all the activity we have slated at this time. This is Gemini Control 132 hours and 33 minutes into the flight.

END OF TAPE

This is Gemini Control at 133 hours and 2 minutes into our flight of spacecraft Gemini V. The spacecraft at this moment is passing over the Pacific Ocean, having just passed over the Coastal Sentry Quebec, our tracking ship located south of Japan. We are on our 84th revolution over the earth. Passing over the Coastal Sentry Quebec, command pilot Cooper passed some medical data to the ground. This consisted of a blood pressure check, temperature, and exercise period, followed by another blood pressure. He also gave a water report to the surgeon aboard the Coastal Sentry Quebec, and received a map update. We will -- at this moment we are 133 hours and 2 minutes into the flight. We have the voice tape now between spacecraft Gemini V and the Coastal Sentry Quebec.

CSQ Cap Com — Gemini V, CSQ. Its a Go on the ground, we have a valid temperature, standing by for blood pressure.

Cooper — Gemini V, CSQ surgeon, blood pressure cuff is at full scale.

CSQ Surgeon — Gemini V, CSQ surgeon, we have a valid blood pressure. Give me a Mark when you begin exercise.

Cooper — MARK

CSQ Surgeon — Gemini V, CSQ surgeon, your cuff is not at full scale.

CSQ Surgeon — Gemini V, CSQ surgeon, it is at full scale now.

CSQ Surgeon — Gemini V, CSQ surgeon, we have a valid blood pressure, Standing by for water report.

Cooper	Rog. Hear you. We've now had 28 gallons 1 ounce -- 28 pounds, 1 ounce. Over.
CSQ Surgeon	Roger, 28 pounds, 1 ounce.
. . .	. . . .
Cooper	At 17 00 00 I had 3 Charlie, meal 3 Charlie.
CSQ Surgeon	Understand. Meal 3 Charlie at 17 00 00.
Cooper	Roger. Do you want the scores on the SAD 13 and M-9 for the pilot and myself?
CSQ Surgeon	If you'd like we can take those.
Cooper	OK. The pilot had 5 wrong on the SAD 13 and on the M-9 his scores were as follows: 99 97 99 97 98.
CSQ Surgeon	Roger. That was all for the pilot, right?
Cooper	Rog. On the command pilot, I had 8 wrong. My numbers on the card 91 91 92 92 92.
CSQ Surgeon	Rog, understand, 8 wrong, 91 91 92 92 92.
CSQ Cap Com	Continue with the Cap Com now. Gemini V, CSQ has a map update if you are ready to copy.
Cooper	Roger, go.
CSQ Cap Com	Roger. Map 05 19 09, longitude 54 degrees west, rev 86, star 05 19 09. 00 03 20 right section.
Cooper	OK, fine
CSQ Cap Com	CSQ has nothing further. Standing by.

END OF TAPE

This is Gemini Control at 133 hours 32 minutes into the flight of spacecraft Gemini 5 which at the present time is passing over our tracking ship in the Pacific, west of the coast of Peru, the Rose Knot Victor. We have had no voice communication with spacecraft Gemini 5 since we passed over the Coastal Sentry Quebec approximately 30 minutes ago, and at that time we had a tape playback of the voice conversation. At this time pilot Pete Conrad is asleep, and command pilot Gordon Cooper is in charge and awake. We have over the Rose Knot Victor, according to our flight plan, only a delayed tape telemetry playback for this station. It would be received there. And the flight continues. We are just ending the 84th revolution and will be starting the 85th in a matter of minutes. This is Gemini Control at 133 hours and 33 minutes into the flight.

END OF TAPE

This is Gemini Control at 134 hours and 2 minutes into the flight of spacecraft Gemini 5 which at the present time is on its 85th revolution over the earth and now is passing over North Africa. Flight director Gene Kranz here in the Mission Control Center gave us a status report on the flight just a few minutes ago. He said the hydrogen usage appears to be slightly better than we had expected, and that the status of our actual flight now is essentially unchanged from that reported when the red team left the control room at 3 p.m. this afternoon. He said all spacecraft systems are operating well at this time. Our flight surgeon Dr. Catterson said that the crew is getting more sleep today. They are eating on schedule and drinking enough water and they are in good health and good spirits. This is Gemini Control at 134 hours and 3 minutes into the flight.

END OF TAPE

This is Gemini Control at 134 hours and 32 minutes into the flight of spacecraft Gemini 5. Gemini 5 spacecraft at the present time is passing over the Philippines on the 86th revolution over the earth. Here in the Mission Control Center we are in the midst of changing shifts. The blue team of flight controllers have appeared on scene and are in the process of being briefed by the white team that has been on duty since 2 p.m. this afternoon. Our spacecraft passed within voice range of the Coastal Sentry Quebec a few minutes ago. However, voice communication was kept to a minimum and the CSQ merely passed on a go from the ground. We have one correction - we are in the 85th revolution instead of 86th as we stated. Here in Mission Control our flight director Gene Kranz and 2 of his controllers, Henry Stephenson - Guidance and Navigation, and John Aaron, our Electrical and Communications Controller, plus our Flight Surgeon Dr. Duane Catterson will be reporting for our nightly press briefing at 11:30 p.m. in the NASA news center here at Houston, Texas. This is Gemini Control at 134 hours and 33 minutes into the flight.

END OF TAPE

This is Gemini Control, 135 hours and 2 minutes after lift-off. Gemini V is within 2 minutes of acquisition by the tracking ship Rose Knot off the coast of Peru. The next station which will acquire it after Rose Knot will be the Canary Island station. This occurs at 27 minutes past the hour. Here in Mission Control there is a changing of the guard underway as various members of the blue team flight control come in and talk with the people they are relieving, the white team people, and it is fairly quiet in here other than muffled conversation. This is Gemini Control.

This is Gemini Control, 136 hours 32 minutes after lift-off. Gemini V is now ending the -- into the -- nearing the end of the 86th revolution. It will be acquired by the Rose Knot tracking ship in approximately 8 minutes. During the pass over the Eastern Test Range station Antigua, a delayed-time tape playback of telemetry infor-tion will be fed down from the spacecraft. Pilot Conrad is scheduled for sleep at this time, and presumably he is asleep. This is Gemini Control.

END OF TAPE

This is Gemini Control 137 hours and 2 minutes after lift-off, Gemini V has just been contacted by Canary Island tracking station. Canary Cap Com said they were standing by, they had nothing for Gemini V. They have just begun revolution no. 87 and in 35 minutes they will be in contact with the Carnarvon, Australia tracking station. While over Australia the crew will attempt some synoptic terrain photography which means in simple terms large land mass areas being photographed from space altitudes. We have a tape of the pass over the Rose Knot at the end of the 86th revolution which we will hear now.

Cooper	Roger, Gemini V here, RKV.
RKV Cap Com	Roger, all systems are good on the ground. We have nothing else for you at this time so we'll stand by.
Cooper	OK, mighty fine, thank you.
RKV Cap Com	Roger.
Houston Flight	RKV, this is Houston.
RKV Cap Com	Go, Houston.
Houston Flight	You might ask him how those rates are going.
RKV Cap Com	Roger.
RKV Cap Com	Gemini V, RKV Cap Com.
Cooper	Go ahead RKV.
RKV Cap Com	How are your rates doing by now?
Cooper	Rog, we just damped them again at about 20 minutes ago.

I fired up and redamped, rates came up to about 12 degrees per second, 12 degrees per second.

RKV Cap Com — Roger, how did it feel at 12 degrees?

Cooper — Not too bad. I thought we would get better heating on that center line . . .

RKV Cap Com — Roger, understand. I was just curious how it felt to you at 12..

Cooper — We didn't really feel much specifically except that items that have been flying around were getting slung to the side of the cockpit.

RKV Cap Com — Roger, understand. Thank you.

Houston Flight — Roger RKV, we copy.

Cooper — Tell him we had to power up for about 1 minute there, brought the AC power up, and I damped the rates down and went back off on it.

RKV Cap Com — Roger, thank you.

END OF TAPE

This is Gemini Control 137 hours and 32 minutes after lift-off. Gemini V is 5 minutes out of Carnarvon tracking station in Australia and is just south of the Republic of Indonesia, nearing the midpoint of the 87the revolution. The communications between the spacecraft and ground stations tonight have been kept to a minimum, primarily to allow the crew more rest. The pilot, at this moment, is still asleep. The last station pass at Canaries, almost a half hour ago, was very brief as far as communications. However, telemetry looked very good on the ground according to the spacecraft communicator at Canaries. This is Gemini Control.

END OF TAPE

This is Gemini Control 138 hours and 2 minutes after lift-off. Gemini V, nearing the end of the 87th revolution is in the mid-south Pacific. Just passed the Carnarvon station a few moments ago. The Carnarvon spacecraft communicator updated the Gemini V flight plan. There are 2 or 3 items to do in the next couple revolutions including infrared measurements in the East Africa Area, of water to land, mountains, desert land measurements in the infrared spectrum. Also, in the East African area and the Arabian peninsula, they have some optic terrain photography tasks provided they can aline for these pictures without using fuel. In fact none of the experiments will be done if fuel is required. Other experiments which were updated included additional S-8 and D-13 vision tester checks of the crew. At this moment we are 138 hours and 3 minutes into the Gemini V flight. We have the voice tape now between spacecraft Gemini V and the Carnarvon station.

Carnarvon Cap Com — Gemini V, Carnarvon Cap Com. I have a flight plan update. Will you prepare to copy?

Cooper — Roger, . . .

Cooper — Goodmorning Carnarvon, Gemini V here, Ready to copy.

Carnarvon Cap Com — Goodmorning. OK, first item, S-8 D-13, sequence number 01 and 02. Remarks, increase to 3 times daily as time permits. Next item, D-4 D-7, 08 41 16, sequence no. 417 418 and 414. Remarks, experiment recorder on, 3 minutes maximum. Next

item, S-5 CL-5, 08 45 00, sequence no. 02. Next item, S-8 D-13, 09 14 06, sequence no. 04. Remarks, pitch down 3 , yaw right 2 degrees. OK, did I tell you to make visual and photo passes, if possible, without using fuel. Do you copy?

Cooper . . . and on the D-4 D-7 will you give me the time again?

Carnarvon Cap Com Roger. Time was 08 hours 41 minutes 16 seconds.

Cooper OK, that's it, huh?

Carnarvon Cap Com That's it. Houston will give you more updates on rev 88.

Cooper Roger

Carnarvon Cap Com Looks like we are going to give you a chance at this visual acquity pattern now it will be your next pass.

Cooper Right.

Carnarvon Cap Com We got a beautiful day down here. I hope you got -- I hope you happen to be in attitude.

END OF TAPE

This is Gemini Control 138 hours and 32 minutes after lift-off. Gemini 5 has just begun its 88th revolution. It is now in contact with the Houston spacecraft communicator through the eastern test range stations and will be acquired in approximately 8 minutes by the Canary Island station. At the present time the spacecraft communicator here in Mission Control is discussing various flight plan updates with the crew and getting onboard read-outs of the systems. This is Gemini Control.

END OF TAPE

This is Gemini Control 139 hours and 2 minutes after lift-off. Gemini 5 is now out over the Indian Ocean, should be acquired by the Carnarvon, Australian tracking station in approximately 8 minutes. During the recent pass over the Canary Islands the telemetry on the ground of the spacecraft systems looked good according to the spacecraft communicator at Canary. We at this moment we are 139 hours and 2 minutes into the Gemini 5 flight. We have the voice tape now between the spacecraft Gemini 5 and the stations of the eastern test range through which the Houston spacecraft communicator talked to Gemini 5.

Conrad	Copy.
Houston Cap Com	S6 14 50 00. Sequence 06. Remarks: south of track. S5 15 10 00. Sequence number 02. D6 16 08 09. Sequence number 05. Pitch 30 down, yaw 15 left. If completed notify ground as soon as possible.
Conrad	What's the mode number?
Houston Cap Com	Negative mode number. We'll pass up a correction on that when you get to Carnarvon. I don't have the speed number either.
Conrad	Is Elliot there?
See	Go ahead.
Houston Cap Com	Roger. Be advised we're . . .
Conrad	There's a story on the 8th too, I've got it going off the bottom of the page at the end of 7 days.
Houston Cap Com	Roger. Be advised we're reading suit temperatures up to about 70. You got any comment on that?
Conrad	That's the way they are. It's cold in here.

Houston Cap Com	Okay. Understand.
Conrad	Everything's freezing up.
Houston Cap Com	Roger. Negative sweat on the H_2 - It's okay.
See	Pete, the usage rate on that will level off as you go along here.
Conrad	Garbled
See	Say it again.
Conrad	You've been saying that for days and it hasn't.
See	You haven't got to the level off point yet.
Conrad	Okay.
Houston Cap Com	It's 10 percent above the estimate right now. Okay we've about had LOS. We'll get the rest of it up to you at Carnarvon.

END OF TAPE

This is Gemini Control 139 hours 32 minutes after lift-off. Gemini V is presently in the central South Pacific, due south of Canton Island station, nearing the end of the 88th revolution. At this moment we are 139 hours and 32 minutes into the GT-5 flight. We now have a voice tape between the Gemini V spacecraft and the Carnarvon, Australia tracking station.

Conrad	Visibility was really good down there. Too bad we weren't in the right position.
Carnarvon Cap Com	Roger, Pete. Yeah, the winters here are beautiful.
Conrad	Is it too cold to swim?
Carnarvon Cap Com	They tell the swimming pool. . . today. It's a little too cool yet.
Conrad	I keep forgetting its winter.
Carnarvon Cap Com	Right. It's beginning to warm up.
Conrad	You can tell them that I got some 414 and some 417's for them on -- in Africa instead of around the Cape coming over on this last pass, on the D-4 D-7.
Carnarvon Cap Com	Roger.
Houston Flight	I got that. You can tell him we'll have another go --
Cooper	I can see some smoke . . .
Carnarvon Cap Com	Say again.
Cooper	I can still see the smoke.
Carnarvon Cap Com	OK. The site's about 3 miles east of the third

column of smoke inland.

Conrad — We're a good 300 miles from it now, past it, but we can still see the smoke.

Carnarvon Cap Com — Roger.

Houston Flight — We'll have another chance tomorrow, Carnarvon.

Conrad — We think the 2 purges are complete.

Carnarvon Cap Com — Roger. We'll have another try at that site tomorrow.

Carnarvon Cap Com — We got a minute to LOS. Everything looks Go on the ground. Standing by.

Conrad — Thank you. We're Go up here. See you next pass.

Carnarvon Cap Com — Roger.

END OF TAPE

This is Gemini Control 140 hours and 2 minutes after lift-off. Gemini 5 has just begun 89th revolution and is now in contact with the Eastern Test Range stations. It was remoted through the - to the Manned Spacecraft Center here to spacecraft communicator. The Canary Island tracking station is the next station to acquire the spacecraft later in this revolution. In a short time we hope to have a tape playback of the State-side pass. This is Gemini Control.

END OF TAPE

This is Gemini Control 140 hours and 32 minutes after lift-off. Gemini 5 is now crossing the east coast of Africa, out over the Indian Ocean on the 89th revolution. During their recent pass over the Canary Islands tracking station the spacecraft communicator said they were on a standby. They had nothing for Gemini 5, but they looked good on telemetry. There was also a reported sighting - visual sighting - of Gemini 5 from the Lake Champlain, prime recovery vessel, at 4 a.m. Central Standard Time approximately 33 minutes ago. At this moment we are 140 hours and 32 minutes into the Gemini 5 flight. We now have the voice tape between the spacecraft and the State-side and voice remoted stations.

Houston Cap Com — From your weather observations you've been doing a real good job, and the weather men are really happy with it down here. And one thing they'd like to have on the observations is the precise time. You're way ahead of any other data they have; and they'd like to get the time of these observations; it'll really help them in their predictions. Okay?

Conrad — Allright.

Houston Cap Com — I have a couple of questions on your thrusters when you were damping your rates during the last few revs. Did any other OAMS thrusters other than 7 and 8 show a degraded performance?

Conrad — Well, I really can't tell too well. We've noticed a little cross-coupling. And that indicates to me that some aren't doing as well as others.

Houston Cap Com — Roger. Understand. Well, we're trying to figure it

out down here. We haven't got an answer yet. Were the circuit breakers on number 7 and 8 closed while you were trying to damp the rates?

Conrad — No, they've been open ever since we were told to leave them open except a couple of times when we took a look at them to see if they'd come back into action because of the heater.

Houston Cap Com — That's what we were wondering about. If you had them closed did you make any attempt to fire 7 and 8? And did you get any response?

Conrad — No response.

Houston Cap Com — Okay. Fine. Understand.

Conrad — Now we haven't done it on the dark side yet. Course we noticed number 8 was firing but giving no thrust, so it was firing off mixture.

Houston Cap Com — Roger. Okay. We understand.

Conrad — I've got some plots for you on the ground. We broke off a piece of frozen urine maybe $3\frac{1}{2}$ inches by 4, and we've noticed an awful lot of stuff floating by the spacecraft which must come from the medic cryos.

Houston Cap Com — Understand.

Conrad — I was wondering if maybe something hasn't run into these thrusters when we haven't been using them or something like that.

Houston Cap Com — Okay. Understand your comment. We'll be looking into it.

Conrad — I'm not exactly sure where all the different vent holes are on the spacecraft in relation to the thrusters.

Houston Cap Com — Okay. Understand.

See — Pete, in regard to your hydrogen it looks like it'll be about 15 more hours before your curve levels off on that, so you can expect this rate to continue down until about that time. Then you'll see it level out quite drastically.

Conrad — You're sure.

See — That's what the curve says here. It's a curve that we did not have before flight, but it's the type of a curve they do expect. After about 15 hours you will stop venting, and this will cause the curve to level off quite drastically. We're running well ahead of it incidentally, but this is the shape of it.

Conrad — Okay.

See — The fact that we're running ahead of it is why you've got another 15 hours to go before you level out.

Conrad — I see.

See — If I understand you in regard to these chance sightings so to speak, although you might be pointing in the right direction your comment is that you would not have the rates stopped well enough to take a picture unless you had actually stopped. In other words, the rates do not decrease at all, they merely go in different directions.

Conrad The Questar lens - the 9000 foot runway up here fills the whole lens up and the probability of having it pass through the Questar field of view is virtually impossible. One, and even if it did you'd never get a picture.

See Because of the rates.

Conrad That's true. That's equally true with the 200 mm although it doesn't blow up quite so big.

See Roger. I understand.

Conrad I seriously don't even think it's worth rigging the gear, myself.

See Well, we thought - we weren't thinking about those rates. If they were fairly high you've got a good point, you just couldn't do it. If you were dealing with some fairly low rates you might try it and just make the comment that you had such and such a rate, and they could kind of take that into consideration when they analyze the pictures.

Conrad Well, we've got plenty of pictures for them out of the Questar anyhow. Over 70.

See I'll bet.

Houston Cap Com Hey, Pete, next time you try your damping on the dark side how about checking 7 and 8 and see if you get a glow out of them.

Conrad We'll do that. The venting must have slowed down because we've - the rates haven't built up too badly.

We're getting along here about 2 degrees per second now.

Houston Cap Com — Okay. Understand. Okay, that's about what we expect.

Conrad — We unfortunately - it was a beautiful day in Australia - and we were just not in the right position to see the SAP13. We saw Sharksmouth Bay, and that's the last thing we saw. We were pitching up, and then we saw the smokestreams 300 miles past over our shoulder, so I'm sure we could've seen it.

Houston Cap Com — Okay. We copied the pass as you went over, and we'll play it again for tomorrow.

See — I lost a bet on that one, Pete.

Conrad — What was that?

See — I bet you'd be looking at it.

Conrad — Came pretty close.

See — I guess you're aware that the thing that we're - we feel is the tightest is the water storage capacity. We're continuing to work on that, but as you know we don't have a real good handle to work with on that one.

Conrad — That's the one thing bad. We've been talking this whole thing over, and we're aware of all the problems.

See — Roger.

Conrad — We're beginning to feel the effects of Gemini 5 : . .

See — The effect of what?

Conrad — Of being confined so long. We're getting stiff, and so forth.

See	Maybe you ought to open the door and stretch a little bit.
Conrad	I'd sure like to.
See	I'm not sure we copied exactly what you said, Pete. We understand you're begining to feel the effect of being cooped up, and were there any other comments?
Conrad	No other comments, just that we're getting stiff.
See	Roger. The exerciser isn't enough on that, huh?
Conrad	No.
See	Roger.
Conrad	There's not enough really - enough room to use it right.
See	Roger.
Houston Cap Com	We about have LOS. We'll see you next pass.
Conrad	Okay.

END OF TAPE

This is Gemini Control 141 hours and 2 minutes after lift-off. Gemini V is now north of New Zealand, nearing the end of the 89th revolution. During the pass over the Carnarvon, Australia tracking station routine planned landing area updates were passed up to the crew for revolutions 91 through 95. There was also a report of a visual sighting from the Carnarvon station of the Gemini V spacecraft. This is Gemini Control.

END OF TAPE

This is Gemini Control 165 hours and 2 minutes after lift-off. Gemini V presently is in the central Pacific nearing the end of the 104th revolution. Recently it made a pass over the Carnarvon, Australia tracking station in which the flight plan was updated and also updates for the planned landing areas for revolutions 107 through 111 were routinely passed up to the crew. People who have extremely good eye sight and are in the Houston and southeast Texas area may possibly be able to see the spacecraft starting at 5:14 this morning when it will rise in a west-southwesterly direction and will have a maximum elevation of about 70 degrees due south at approximately 5:19 central time, and will set over the eastern horizon at 5:22. The slant range at this maximum elevation will be approximately 132.7 miles. We stand now at 165 hours and 3 minutes after lift-off. We have now a tape of the voice transmission between the Carnarvon, Australia tracking station and Gemini V during this last pass.

Carnarvon Cap Com	Gemini V, Carnarvon. I have PLA update when you are ready to copy.
Conrad	Roger, ready to copy.
Carnarvon Cap Com	Roger, area 107-1, 14 14 44, 12 + 43, 18 + 04, test 8TX. Next area, 108-4, 17 00 17, 15 + 33, 20 + 37, Next area, 109-4, 18 35 54, 14 + 08, 19 + 19. Would you place your quantity read switch to fuel cell H_2.

Next area 110-3, 19 53 52, 16 + 42, 21 + 52.

Next area 11[illegible], 21 29 46, 15 + 13, 30 + 19.

Weather is good in all areas, bank angles are roll left 53 and roll right 67 for all areas.

Do you copy?

Conrad — Roger.

Carnarvon Cap Com — OK, turn your quantity read switch off. We have a flight plan update for you when you are ready.

Conrad — Go ahead.

Carnarvon Cap Com — Roger. Stand by one.

Houston Cap Com — You have to leave your real time TM off.

Carnarvon Cap Com — OK, flight plan update. First item, map 110351, remarks, longitude 15056 degrees west, rev 104.

Next item star 110351, remarks, 22 hours, 26 minutes.

Do you copy?

Conrad — Affirmative.

Canarvon Cap Com — OK, and one more item we had a medical data pass on the pilot at Guaymas. The AOS time is 10112.

Conrad — Say again the AOS time, please.

Canarvon Cap Com — Roger. [illegible] hours, 12 minutes.

Conrad — OK.

Canarvon Cap Com — Have you got writer's cramps?

Conrad — Yeah. We do an awful lot of writing, but not much work.

Canarvon Cap Com — Roger.

Conrad Did you see us out there today?

Canarvon Cap Com Negative. We've got almost complete overcast today.

END OF TAPE

MISSION COMMENTARY CORRECTION

Due to misnumbering of tapes, there is no tape number 388.

This is Gemini Control 165 hours and 32 minutes after lift-off. Gemini 5 is presently in the mid-Atlantic and will be acquired by the Canary Island tracking station in 2 minutes. It is at the beginning of the 105th revolution. During the pass over the Guaymas, Mexico tracking station at the end of the 104th revolution the command pilot ran a medical data check and also made a report of his food and water consumption as well as his sleep. We stand now at 165 hours and 32 minutes after lift-off. We now have a tape of the just completed State-side pass by Gemini 5.

Guaymas Cap Com — Gemini 5, we have a valid oral temp. Stand by for surgeon.

Guaymas Surgeon — Gemini 5, Guaymas surgeon here. We're standing by for your blood pressure. Your cuff is full-scale. We have a good blood pressure. Standing by for your Mark when you begin exercise.

Cooper — MARK.

Cooper — I have now exercised.

Guaymas Surgeon — Roger. Your cuff is full-scale. We have a good blood pressure. We are standing by for your food, water and 24-hour sleep report.

Cooper — Roger. On water, I've had 31 pounds and 7 ounces of water. On food, at 0702 00 00 I had meal 4 Charlie. And in last 24 hours I've had approximately 3 hours of sleep and I'm due for my next sleep period in an hour.

Guaymas Surgeon — Roger. We copy. 31 pounds plus 7 ounces of water, Meal 4 Charlie at 07 02 00 00 and three hours of sleep in the last 24. Could you give us an estimate of the

quality of the sleep.

Cooper — Very good.

Guaymas Surgeon — Roger. Thank you very much. Guaymas Surgeon out.

Cooper — Roger.

Guaymas Cap Com — Gemini V, Guaymas. You are looking good here on the ground. Would you turn your real-time and press in your TM control switch to the Command position.

Cooper — Roger.

Cooper — Guaymas, Rog. I'm firing up my FDI's to take our rates out now.

Guaymas Cap Com — Ah roger. Understood. Flight, Guaymas.

Houston Flight — Roger, I read.

Guaymas Cap Com — Okay.

Houston Flight — We are going to take it now, Guaymas.

Guaymas Cap Com — Go.

Houston Cap Com — Gemini, Houston. We haven't got anything for you. You might give us a comment on your rates when you get them damped down.

Cooper — Roger. They weren't too high. We just thought we would go ahead and damp them down.

Houston Cap Com — Okay, thank you. We appreciate it. Looking good on the ground.

Cooper — Roger.

Houston Cap Com — Gemini V, Houston Cap Com. We are doing some more discussion on this hydrogen here and the latest thought is that the venting may not stop until we get down to 10 percent on the gauge. But, I'd like to reinterrate

that even if it continued without leveling off anymore at all, we would be in good shape at the end of the mission. We would still have some 4 or 5 percent remaining. We are continuing to monitor this very closely and we do expect it to level out somewhat here as soon as it stops venting which the latest estimate is, it may be as low as 10 percent.

Cooper — Okay, just fine.

Conrad — My status in regard to experiments is still no fuel expenditure, is that correct?

Houston Cap Com — That's correct.

Conrad — Okay.

Houston Cap Com — You understand the reason, I think, don't you, Pete. We are trying to make certain that we have fuel available to stop these rates as long as we need to do so. Once we get to the point where we don't have any rate buildup due to venting, then we will be free to use the rest of the fuel for experiments.

Conrad — Yeah, okay.

Houston Cap Com — We'll give you a decision on that radar test on the next rev as you go by on the fuel usage.

Conrad — Okay. The OAMS system is plenty sluggish now. I'll tell you, it just doesn't seem like it is putting out what it use to.

Houston Cap Com — Rog, I understand.

Houston Cap Com — Pete, do you feel that there are any other thrusters tending to go out at this time, or do you feel it's just a general sluggishness of the system?

Conrad — Well, they very definitely have degradation of several thrusters because we've got -- I think more cross-coupling then we should have. As a matter of fact, it has started, let's see, roll has started to couple into pitch now, which it hadn't done before; yaw -- when we are using right yaw -- right yaw has been coupling into roll which it is still doing. But I just think that general performance is just dropping off and dropping off.

Houston Cap Com — Roger.

Conrad — It may be when we fired up for good, that if we make a good shot at the retro all the way around or something, we might sort of liven things up. I don't know.

Houston Cap Com — Are you doing all your damping with pulse?

Conrad — That's correct.

Houston Cap Com — Let's -- there may be a lot to that. You are just not clearing the system up and you haven't been for a long time. It may just be needing a good shot of clearing out, but we don't want to do that.

Conrad — We're right smack dab over Houston, it looks like right now. I can just make it out as the sun is coming up.

Houston Cap Com — Very good. Everybody is outside looking for you.

Conrad They ought to be able to see us because the sun is shining on us and not on you.

Cooper Can you see us at Clear Lake too.

Houston Cap Com Yeah, we have had some reports of sightings.

Cooper Okay, we're powering down all our ..... , and so forth.

Houston Cap Com Roger.

Houston Cap Com Gemini V, Houston.

Cooper Go ahead Houston.

Houston Cap Com When you mentioned that the pitch and roll coupled, and the yaw and roll coupled, which direction of roll was that. Can you give us an idea?

Conrad Let's see. Right yaw coupled into right roll, I guess.

Houston Cap Com Okay.

Conrad I think it says that the number 3 yaw thruster is the weaker of the two.

Houston Cap Com Roger. How about the pitch?

Conrad The roll, the right roll -- excuse me. The left roll coupled into pitch up.

Houston Cap Com Okay, understand. Incidentally, as you went by, you were extremely easy to see and I think just about all of Houston saw you.

Cooper Very good.

Conrad What's our empheris now. Still 107?

Houston Cap Com Stand by.

Conrad What?

Houston Cap Com Stand by.

Houston Cap Com 107.4 by 159.0.

Conrad Roger. Let's see, what are the outlooks for the recovery area tomorrow?

Houston Cap Com I think it all looks pretty good. I'll get a detail on it.

Houston Cap Com Gemini V, Houston.

Cooper Go ahead.

Houston Cap Com The way it stands right now, 122-1 is acceptable but about 500 downrange is not so good, 121-1 is clear all the way.

Cooper Roger. Thank you.

Houston Cap Com We're watching it real close down here.

Cooper Okay.

END OF TAPE

This is Gemini Control, 166 hours and 2 minutes after lift-off. Gemini 5 is now midway through the 105th revolution and will be acquired by the Canarvon, Australia tracking station in approximately 7 minutes. The time to retro fire clock at the right-hand side of the Control Center here now says 25 hours and 59 minutes and 55 seconds until retro fire. This is Gemini Control.

END OF TAPE

Gemini Control here. Good morning; 166 hours, 28 minutes into the flight, and we are still waiting for the State-side pass which will be a decision point on whether we are going to go for 122-1 or not. The status of the spacecraft will also be a very strong determining factor on how much experimenting we do in this State-side pass, and we'll come into that as quickly as conversation develops. We do have ready for you now a conversation from Canarvon, and we'll play it now.

Canarvon Cap Com — Gemini 5, Canarvon. Place your quantity read switch to the ECS O_2 position.

Cooper — Hello, Canarvon, Gemini 5 here. We have the number 2 fuel cell powered up on the line.

Canarvon Cap Com — Roger.

Cooper — Had one on at about 1203.

Canarvon Cap Com — Roger. OK, would you go to FC O_2 on quantity read?

Cooper — Canarvon, Gemini 5. We noticed a lot of venting again coming into the dark side this trip, but we presume it's ECS O_2 this time.

Canarvon Cap Com — Did you say you noticed a lot of venting?

Cooper — Yeah, a couple of times.

Canarvon Cap Com — Roger. Now would you place your quantity read switch to the fuel cell H_2? Go ahead, flight.

Houston Cap Com — Roger. We don't think that EC O_2 is going to give him much in the way of moments. That vents inside. as close to (interrupted by Canarvon Cap Com)

Canarvon Cap Com — Roger. Roger. Did that venting there give you

much rate?

Cooper — Oh, it's picked it up a little bit, but not much.

Canarvon Cap Com — OK, flight advises that they don't suspect ECS O_2 will give you much of a rate. There's not much movement on that that's near the CG.

Cooper — Well, we think that that's probably what it was that was venting.

Houston Cap Com — Did he see that, or did he feel it by rates? Did he see a lot of fire flies and things, or is he estimating that on the basis of rates he got?

Canarvon Cap Com — Gemini 5, were you estimating that venting on the basis of rates or visual?

Cooper — Visually.

Houston Cap Com — Roger.

Canarvon Cap Com — OK, did you place your quantity read switch to the off position? Everything looks good here on the ground.

Cooper — We're go up here.

END OF TAPE

This is Gemini Control Houston- here, 166 hours and 42 minutes. The U.S Weather Bureau, Spaceflight Meteorology Group, says this morning that weather conditions remain quite good should Gemini 5 be committed to an eigth day. The center of tropical storm Betsy was estimated to be about 100 miles southeast of the island of Barbados, several hours ago. Movement was predicted to be on a course of 280 degrees at a speed of 14 knots and the strongest winds to be near 40 knots. The storm is still in the early stages of development and not too quite precisely positioned. Betsy will not likely affect weather conditions significantly in the primary landing area about 600 miles east and a little south of Miami. But an alternate landing area off Jacksonville at the end of the previous revolution will have more favorable weather conditions. Off Miami skies will be frequently cloudy with ceilings of 1,000 feet or less, and scattered showers covering about 10 percent of the surrounding ocean area. Winds will average nearly 20 knots, the seas five to six feet. Off Jacksonville, skies will be less cloudy, with little chance of showers. Winds between 10 and 15 knots and seas of about 3 feet are expected. In the east Atlantic recovery area, about 300 miles west of the Canary Islands, skies will be partly cloudy, ceilings usually unlimited. Winds will average 10 to 15 knots and seas 3 to 4 feet. In the mid-Pacific area, about 500 miles north of Honolulu, cloudiness is decreasing, ceilings when present will be about 800 feet, winds will average 10 knots and seas two to three feet. In the west Pacific area, about 500 miles south-west of Tokyo, mainly fair weather will continue, winds will average a little over 15 knots and seas of four feet. In addition to tropical storm Betsy, a new typhoon has evolved in the fertile area of

the western north Pacific. Typhoon Olive is centered about 1,000 miles southeast of Tokyo moving slowly towards the northwest, probably not much remains of storm Doreen, now centered about 800 miles west of San Diego. In the southern hemisphere, major storms are nearly all centered south of the ground track of Gemini 5, but cold fronts may be seen near South Africa, South America and Australia. This is Gemini Control.

END OF TAPE

This is Gemini Control, 166 hours and 48 minutes into the flight. And the spacecraft has established contact with our Texas station about to go over White Sands area. They have been told to perform a no fuel tracking task of a sled run outh there at Holoman Air Force Base and let's tune in on them now..

Houston Cap Com — Gemini 5, Houston. We'd also like to have you bring up yo HF receiver so we can play some music as you leave the States here.

Cooper — Very good.

Houston Cap Com — Gemini 5, Houston. We'd like to have you place your biomedical recorder switch ot off now. We'd like to save the rest of the tape until just prior to retrofire.

Cooper — Ok.

Conrad — Bimed recorders one and two are both off.

Houstnn Cap Com — Ok. Gemini, Houston. The big blue team gives you a Go for 122-1. Press on.

Cooper — Roger. We're pressing on.

Houston Cap Com — Good show.

Conrad — Ok, blue team. Over the ocean, over the blue, Gemini 5, we thank you.

Houston Cap Com — Great. Now we're discussing poems here - I was talking to both Jane and Trudy this morning and they both went outside and saw you. And Jane sent up a little poem here Pete. It goes: "Twinkle, twinkle, Gemini 5, How I want you back alive. Up above the world so high, I saw you today as you went by. Twinkle, twinkle, Gemini

Houston Cap Com — Most of the things that we've got on the schedule today are all to be done with no fuel. So there - if you happen to get pointed in that direction, fine. If you can't, well, that's too bad. We would like to have you so your damping, though, so that you take advantage of the fuel that you're doing the damping with pointing in the direction that would be usable to you. And especially so on the Laredo SAD 13 pass, which is supposed to occur at 16 00 40. WE might even expend a little fuel on that to point the spacecraft in the right direction so that you can see the targets. Ok?

Conrad — All right. We concur.

Houston Cap Com — Ok. We're still conserving the fuel - I just got here as Elliott was briefing you on the venting and when it may stop, but we would like to get that Laredo SAD 13. Now for tomorrow we have a couple of other things that we want to do. One of which is to do the D-4,D-7 pointing at the sun, and another one is an SAD 13 at Woodleigh Ranch, if possible.

Cooper — Right.

Conrad — What's their weather outlook tomorrow? They were overc[illegible] today.

Houston Cap Com — Rog. We had them scheduled but we scrubbed them. We don't really know what it's going to be tomorrow, yet, Pete. We've got no forecast for them.

Conrad — Funny thing - the day before yesterday it was so clear down there you couldn't believe it.

Houston Cap Com — Rog.

Gordo, Houston. As I said, on your last pass, Trudy saw you up there without too much trouble at all. She sends here best wishes and she says that she had the girls up quite early this morning and they all went out and saw you and they certainly enjoyed it.

Cooper — Very good, thank you.

Houston Cap Com — She said you put on a good show.

Conrad — No better than you did.

Houston Cap Com — Roger, Pete, Jane said that Gemini horoscope for today the paper said that you should get your house in order and the evening was good for dining out, in case you're interested.

Conrad — Ok.

Flight — Gemini 5, this is Houston Flight. Stand by. With regard to these recovery areas, we're going to take a look at the weather for the rest of the day and as you come up on this thing, our feeling at the moment is that we will go to 122, but we will also be prepared in 121.

Cooper — Ok. Very good.

Flight — The other thing is it looks like, from here to the end of the mission, we've got no problem with water or with the hydrogen we have left and that you can average quite a bit higher amps thatn we would expect that you

would so that's no problem.

Cooper Ok. Fine.

Houston Cap Com Gemini 5, Houston. Have you got the HF up?

Conrad Roger.

Houston Cap Com Ok, stand by.

Cooper Hey, that sounds good.

Gemini Control here. They've picked up a little musical interlude. I want to explain that the Go for 122-1 was passed up by Capsule Communicator Dave Scott. Most of the communications on that pass were handled by Jim McDivitt, the red team capsule communicator. However, Dave reserved the right to pass up that Go, because of the timing of the shifts here. You heard him say the "big blue team gives you a Go for 122-1." Jim picked it up from there then Chris Kraft came on toward the end and explained his thinking on the recovery areas tomorrow morning, that they were inclined to go for 122-1 but we'd also be covered in 121 if needed. Let's go back and listen to the music. (Music plays)

This is Gemini Control here. That of course is the sound track of the movie Cat Ballaou. We've had a momentary dropout of Cat Ballaou for an unexplained reason. We'll stand by and here it is again. (Music plays)

Gemini Control here. As you can see we are experiencing intermittent dropouts on our Cat Ballaou transmitter. I'm sure that the problem is somewhere in this building. With the spacecraft out east of Bermuda, that will probably wrap up the conversation. So, we'll leave the spacecraft now. (Music again resumes).

END OF TAPE

Gemini Control Houston here; 167 hours, 32 minutes into the flight, and we'll briefly interrupt this special interlude to bring you the following information: our perigee this morning is 123.4 statute miles, our apogee, 183 statute miles. The period of our inertial orbit is 89 minutes, 20 seconds. The period of our revolution orbit is 95 minutes, 18 seconds. We were in conversation earlier this morning with several staff members of the little cafeteria that serves the Mission Control Center here just a few steps off the floor of the Mission Operations Control room itself, talking about the coffee consumption. They advised during this shift, during this mission, we've averaged about 300 cups per shift. The people in the cafeteria say that they always know when there is trouble, because the coffee consumption begins to spike very quickly. Falling into the jargon of the mission, the cafeteria staff people advise that the coffee consumption curve is very close to the planned values. This is Gemini Control Houston.

END OF TAPE

Gemini Control here; 168 hours, 2 minutes into the flight. We've completed the Canarvon pass, spacecraft half way between Australia and Hawaii right now. We regret that we can't give you the tape on that pass. We've experienced some technical difficulty. We don't know whether it's here in building 30, in Mission Control Center, or over in our News Center Building, but we are working on it from both ends and expect to have it solved momentarily. In the course of the Canarvon pass, the conversation went like this: the crew has passed up a pre-retro command load for 122-1 landing area, and that is the final command load they will get, except for up-dates on the orbits remaining between now and 122-1. They will, over Hawaii, power down the platform. It was turned on over the States and was pulling a peak amp load of 39 amps along with the other systems activated. Over Hawaii they will damp out their tumbling rates, and they will attempt to position the spacecraft small end down; the reason for this is that in the next pass across the States they will attempt another radar test at Cape Kennedy. They will activate their radar and try to read the L-band signal being piped out of the Cape. Also from Canarvon the Gemini 5 crew received congratulations of the station keepers at the Canarvon station, and the crew came back with some nice words for the performance of the Canarvon crew also. Pete Conrad said, "Good show down there." The spacecraft communicator, Charles Lewis, an MSC employee working at the Canarvon site this mission, promised the crew he would bring each of them a can of Swan lager beer back to Houston. This seemed to delight the crew very much. This is Gemini Control at 168 hours, 4 minutes into the flight.

END OF TAPE

Gemini Control here, 168 hours 20 minutes into the flight. We have just concluded the Hawaii pass and we have the tape ready. We will play it for you now.

Hawaii Cap Com — Gemini V, Hawaii Cap Com.

Conrad — Go Hawaii Cap Com. Gemini V here. Go ahead.

Hawaii Cap Com — Roger, all your systems are looking good. We are standing by.

Cooper — Computer platform is down and we are going to warm up the radar at this time.

Hawaii Cap Com — Roger.

Houston Flight — You show the computer is still on?

Hawaii Cap Com — That's affirmative.

Houston Flight — Roger.

Houston Flight — Hawaii, you might tell him that it looks like his hydrogen is not venting, if that makes him feel warm.

Hawaii Cap Com — Roger.

Hawaii Cap Com — It looks like your hydrogen is not venting.

Conrad — We concur that the pressure has dropped to about 740 the last time I looked.

Hawaii Cap Com — Roger. By the way, you passed through 24 hours, you are now 2[illegible] hours and 50.

Cooper — Oh boy.

Conrad — We will be looking for you to count down tomorrow.

Hawaii Cap Com — I'm practicing.

Conrad — So are we.

Hawaii Cap Com Looks real good, Flight.

Houston Flight Roger.

Houston Flight Hawaii, ask him at which direction he is pointing in at the minute.

Hawaii Cap Com Which direction are you pointing in at the moment?

Conrad We are pointed about 30 degrees nose up, about 30. degrees yaw right.

Hawaii Cap Com Copy Flight.

Houston Flight Roger. Ask him if he has any rates.

Hawaii Cap Com Do you have any rates?

Conrad They are relatively low right now. We just put the timer to just gently start her back down so that we are already pitched down by the time we hit Florida.

Hawaii Cap Com Roger. He's got the radar up, Flight.

Houston Flight Roger. I want you to give us an LOS main.

Hawaii Cap Com Roger.

Houston Flight A and B.

Hawaii Cap Com We are coming up on LOS minus 1 minute.

Conrad Roger, Gemini V, standing by.

Hawaii Cap Com C-band LOS. Telemetry LOS. Ac-aid LOS.

Gemini Control here. We are about half way across the State side pass, with the spacecraft directly over Texas. We have established already in the early part of the pass that the hydrogen, fuel cell hydrogen, has stopped venting. It has stopped venting and we noted a pressure drop on that tank from -- it had been running about 349 to

350 pounds, it dropped to 344. A very encouraging sign. We expect some conversation momentarily between Jim McDivitt and the spacecraft. Let's tune in there and find out what is going on.

Houston Cap Com Roger. It looks like we finally got it stopped.

Cooper Pete finally hit one after a few tries.

Houston Cap Com Gemini V, Houston here. Over.

Houston Cap Com Gemini V, Houston standing by.

Houston Cap Com Gemini V, Houston.

Cooper Go ahead Houston. Gemini V.

Houston Cap Com Roger, we're standing by. How are you drifting? Are you drifting in the right direction?

Cooper We are pitch down and in pretty good shape. We are yaw just slightly off the to the left. We're in pretty fair shape I believe.

Houston Cap Com Very good, very good.

Gemini Control here. One of our quieter passes. As the mission has progressed, I think we have noted less and less conversation with each pass. I think that is true of all stations. We will be performing a radar check over the Cape at which point they should be at in about 30 seconds. We will stand by for anything additional.

Conrad .. range not reading right in 69 yet.

Houston Cap Com Okay, keep us apprised at what happens.

Conrad Okay, I'm going to go to catchup once, quicky.

Houston Cap Com Roger.

Conrad It is still not reading right. Going to standby.

Houston Cap Com Okay.

Conrad It is still not reading right.

Houston Cap Com Okay.

Conrad Okay. We're well past the Cape and we went past the Cape on look angle and we just broke lock.

Houston Cap Com Roger, just broke lock.

Conrad Roger, we never did get the proper range indication.

Houston Cap Com Roger.

Conrad We are going to turn the radar off at this time.

Houston Cap Com Roger. We'd also like to have you bring the platform back up now, Gemini V.

Conrad Okay, platform has gone to cage.

Houston Cap Com Gemini V, looks right now that we are never going to be able to spare the fuel to aline the platform while we are doing this, so if you ever pass through 000 and you'd like to go ahead and uncage it, go ahead.

Cooper Yeah, we would try to get some simple ones in.

Houston Cap Com I sort of figured you would. Gemini V, do you think you will be able to do this selected drifting and do any good over Laredo?

Conrad Yeah, with the cost of a couple bleeps of fuel, why, it didn't cost us too much. We came pretty well across the country with the nose down that time.

Houston Cap Com Okay, very good. So the next pass will be over Laredo

and we would like to have you use this sort of technique to see what you can do with the visual aquity target.

Conrad It's okay for that, it is impossible for D-6. They have been asking for the Questar Mode and you have to absolutely track.

Houston Cap Com I know that, Pete, and I have already talked to all of them about that. It's not for -- I think there is probably one chance in a million you might get a picture.

Conrad Yeah, that's my feelings.

Houston Cap Com We would be more than happy if you just see the targets at Laredo, and I think that would be a pretty successful day.

Conrad Okay.

Gemini Control here.

Houston Cap Com ... a few minutes here before we lose you. We don't have anymore information. We'll just stand by.

Conrad Okay, we'll try and get a look at Betsy and get the S-7 photograph. We got 6 fairly good S-5 photographs across East Africa. Now the time that they gave us for the S-5 was for East Africa and the Mode was for Mexico and I presume it was East Africa that he wanted.

Houston Cap Com Rog. Is there any information that we could furnish you, that you think would be of use to you?

Conrad No. We have a couple of ideas about alining the platform tommorrow and namely, we didn't know

whether to try out the RCS and put one ring on the line and close off all the circuit breakers to yaw left and use it direct or expend fuel out of 7 and 8 which are not burning but are giving some thrust and use it to aline.

Houston Cap Com Roger. We are working on that right now. Can you see the weather right below you right at this time?

Conrad Yes sir. It is a nice round circular storm with a bunch of Cu clouds in it.

Houston Cap Com Okay.

Conrad It is circular but it really doesn't have a defined center as such, but it is open in the center with a couple of really large thunderstorms.

Houston Cap Com Okay.

Conrad And it is 300 or 400 miles across.

Houston Cap Com Okay, we know what storm that is.

Conrad Say again?

Houston Cap Com I say, we know which storm that is.

Houston Cap Com We were a little more interested, Pete, in the weather that was behind you there over 122-1?

Conrad Loud and clear.

Houston Cap Com Roger.

Conrad It looked like it was all scattered all the way.

Houston Cap Com Okay, the thinking right now is that we will arm both the RCS rings and then use one of the rings to do the platform alinement. You might think about that for awhile.

Conrad Well, why not start out with the -- we'll try the CAMS and if we can get it alined with that, we're just that much fatter, if not we use the RCS.

Houston Cap Com Okay. We are working up a good sound set of procedures right now for all the things -- all the contingencies that we might have and we will relay them to you later on in the day and have you take a look at them and see what you think.

Conrad Okay.

Houston Cap Com Gemini V, Houston.

Cooper Go ahead Houston.

Houston Cap Com We have a medical data pass on the Pilot at Carnarvon next time and the AOS is 15 17 50.

Cooper Good.

Gemini Control here. I think we are out of communications range. That pass from the spacecraft well south of Antigua now between Ascension and Tananarive. The Pilots will take on a if can basis some more synoptic weather photography and over Carnarvon there will be a medical data pass on Pete Conrad. This is Gemini Control out.

END OF TAPE

Gemini Control here; our elapsed time, 168 hours, 52 minutes, and our time-to-retro-command clock shows 23 hours, 10 minutes. During that last pass across the Cape, the spacecraft did achieve a radar lock with the L-bank signal from the Cape, and Cape locked up on the spacecraft. A few minutes later Jim McDivitt had a brief chat with the spacecraft as it went over Ascension. The conversation went like this.

Houston Cap Com — Gemini 5, Gemini 5, Houston. Over.

Cooper — Houston, Gemini 5 here.

Houston Cap Com — Gemini 5, Houston. We're interested in what kind of accelerations you're getting out of your spacecraft now that the hydrogen is not venting, so we'd like to see if the rates build up at all without any thruster activity. We'd like to have you do this for long enough so that you can see if there is any significant increase, and would you sort of keep this in mind so that you can inform us the next time you talk to us?

Cooper — OK. I've got a question for you.

Houston Cap Com — Shoot.

Cooper — Any reason why we are using the secondary coolant pump A rather than B?

Houston Cap Com — It's about six tenths of an amp more efficient than the other pump.

Cooper — Garbled

Houston Cap Com — There's a little piece of information for you.

We've got about 3 or 4 more minutes here, but we don't have any other information. We'll just stand by.

Cooper Check.

END OF TAPE

Gemini Control, Houston here; 169 hours, 2 minutes into the flight, with the spacecraft out on the southern tip of Africa. About 20 minutes from now, when we're over Canarvon, Pete Conrad will go through a medical data pass. About 20 minutes later, between Hawaii and California, there is some photography planned if the spacecraft is pointed in the right direction. Later, over Texas, on the upcoming swing, we will try to acquire those eye charts again about 40 miles north of Laredo. They were observed very quickly on the last pass, and we are hopeful that the pilots will be able to see them again today. This is Gemini Control at Houston.

END OF TAPE

This is Gemini Control, Houston; 169 hours, 31 minutes into the flight, and we're in the 107th revolution. During the recent Canarvon pass, Pete Conrad reported he'd drunk a total of 32 pounds, 10 ounces of water, and he was in the process of eating meal 5 Alpha. Meal 5 Alpha consists of grapefruit drink, chicken bites, corn chowder, peaches, and brownies, 8 in number; total calorie intake of 932 calories. Also during the past, of some significance, is the fact that Pete reported the hydrogen venting, the stoppage of the hydrogen venting which stopped venting about, oh, during the last revolution. The spacecraft now is experiencing very, very slow rates, on the order of only one quarter of a degree per second in pitch, and very little in the other axes. The fuel cell hydrogen pressure is presently reading 340 pounds, and is not venting. We have the Canarvon tape, and we'll play it for you now.

Canarvon Cap Com — Gemini 5, Canarvon. We have a valid oral temp. Stand by for Surgeon.

Canarvon Surgeon — Gemini 5, Canarvon Surgeon. We observe your cuff is.....Cuff is full scale. .... We have your other blood pressure. Would you give us a mark when you begin your exercise?

Conrad — Roger. Mark.

Canarvon Surgeon — Cuff is full scale. Roger, Gemini. We have a valid blood pressure. Would you update us on your water status, please?

Conrad — Had 10 ounces.

Canarvon Surgeon — Say again, Gemini.

Conrad	Roger--10 ounces.
Canarvon Surgeon	Say again pounds.
Conrad	32.
Canarvon Surgeon	Roger, we've got it. Just a second, Gemini, Surgeon out.
Conrad	I ate meal 5 Alpha.
Canarvon Surgeon	OK, 5 Alpha.
Conrad	That's affirmative.
Canarvon Surgeon	Thank you, Surgeon out.
Canarvon Cap Com	Gemini 5, Canarvon Cap Com. Would you turn your bio-med recorder number 2 on and leave it on for duration of mission.
Conrad	Bio-med recorder number 2 is back on.
Canarvon Cap Com	Flight would like to know if you've got any rates switch you can give us.....
Conrad	They are very, very low. Looks like we don't have anything in roll and maybe a quarter degree or less in yaw, and about the same in pitch. Very slow drift rate.
Canarvon Cap Com	Roger. .....TM off. The flight wants you to be advised they are standing by for the Laredo test on this pass.
Conrad	Roger, the radio test.
Canarvon Cap Com	The radar test.
Conrad	Laredo, roger. What's the weather guess give down there for tomorrow for the Canarvon site?

Canarvon Cap Com — We don't know the weather as yet.for the SAD 13. Is that what you are referring to?

Conrad — Affirmed.

Canarvon Cap Com — It's still overcast at this time. They think it might clear.

Conrad — Roger.

Canarvon Cap Com — .....LOS. Standing by.

Conrad — Gemini 5, right here, standing by and see you tomorrow.

Canarvon Cap Com — Roger. That's must be a pretty good map you've got.

Conrad — Did you say nap?

Canarvon Cap Com — I say map, your orbital map.

Conrad — Why is that?

Canarvon Cap Com — How did you know it was our last pass?

Conrad — Oh, well yeah. We keep the map up to date.

Canarvon Cap Com — Right.

Conrad — Actually, we've been so nominal on the orbit that we've been on the original flight plan from lift-off as far as stations go, and we slipped 24 minutes is all on the station passages.

Canarvon Cap Com — Roger.

Conrad — That's not bad for 7 days.

Canarvon Cap Com — No, it isn't.

Houston Cap Com — All that was due to the maneuvering we did.

Canarvon Cap Com — Flight says all that was due to the maneuvers we did.

Conrad — That's affirmative.

Canarvon Cap Com — We've had C-band LOS.

Houston Cap Com — Roger.

Canarvon Cap Com — Still on the beacon. Ac-aid LOS. Flight, did you copy about the rates?

Houston Cap Com — Affirmative. We copied all.

Canarvon Cap Com — Roger. A point on that C-band adapter--we've got a message received earlier that C-band (interrupted)

Houston Cap Com — Roger. You got that from network.

Canarvon Cap Com — I must have, yeah. The mission instruction message didn't include it, but we went ahead on the other.

Houston Cap Com — He's made his one mistake for the flight.

Gemini Control, Houston here; 169 hours, 41 minutes into the mission. Within the last 15 minutes we have been in contact with the Lake Champlain, the Public Affairs Officer stationed out there, and he's given us a little run down on what's in store for the crew tomorrow when they board that ship. It goes like this: the first few hours will be reserved for medical checks. Starting with the command pilot, the first thing that he will do is undergo a series of X-rays of the chest and the heel bone, followed by a blood chemistry work up, checking the plasma volume, the red cell mass, to be followed by some EKG readings. While Gordon Cooper is undergoing those tests, Pete Conrad will be on the tilt table getting his number 1 tilt. Then the next hour Gordon Cooper is to get an eye exam, to be followed by a tilt, his number 1 tilt. Meanwhile, Pete Conrad will get the same sort of checks that Gordo got during that first hour. The next thing on the schedule for Gordon Cooper is a hearing test, to be followed

by a neuro-psychiatric test, which will include a thorough examination of the nervous system, paying particular attention to the motor responses. Pete then will pick up that part of it during that side of the hour. That will be followed by an internal medical check on both. So the overall schedule shapes up something like this. They are reserving about an hour to an hour and a quarter for recovery exercises themselves. Then they block out about 6 hours for the medical check. They are allowing a half an hour for clean up and shave for both pilots. Then there'll be a half hour set aside for visiting the spacecraft, which by then will be on the hangar deck. That evening they will have dinner in the general mess with the enlisted men, to be followed by a dessert in the Award Room in the Lake Champlain with the officers. After dinner there'll be more tilts and some additional medical checks, fairly brief. Then they plan to be in bed by 10 p.m. tomorrow night. They'll be up early the next morning about 5:30 a.m. and if all the plans hold for it now, they will be leaving the carrier about 7:30 a.m. All the times I gave you were local carrier times. This is Gemini Control at Houston.

END OF TAPE

Gemini Control Houston here, 169 hours 51 minutes into the flight. In the just completed Hawaii pass, the crew was instructed to look for that pencil shaped shaft of light out over White Sands, The Lasser experiment is up and we will attempt to acquire that visually. During the pass, we will also, the crew will also be looking for the eye charts north of Laredo. Here is the Hawaii conversation.

Hawaii Cap Com	Gemini V, this is Hawaii Cap Com.
Cooper	Hello Hawaii Cap Com. Gemini V here. Go ahead.
Hawaii Cap Com	Roger, we hold you green on the ground.
Cooper	Our status is green here.
Hawaii Cap Com	Roger. I have a flight plan update when you are ready to copy.
Conrad	Ready to copy.
Hawaii Cap Com	Roger. Map 15 31 24, longitude 140.7 east, rev 107.
Conrad	Roger on the map.
Hawaii Cap Com	Star, 15 31 24, 23 hours 20 minutes.
Conrad	Roger on the star.
Hawaii Cap Com	Okay, Gemini V, we have a little information for you here. The Laeser beam is going to be up at White Sands, they are going to be ready for that. They are set up for Laredo and Flight would like to have a UHF 6 during the pass over the States.
Conrad	Okay, very good.
Hawaii Cap Com	Gemini V, we have nothing further. We are standing by.
Conrad	Roger, Gemini V standing by.

Hawaii Cap Com Are you still looking ..... We have all our ..... out but they are not back yet.

Houston Flight Rog. We have it.

Hawaii Cap Com Roger.

Gemini Control here. Jim McDivitt has just put out his first call for the spacecraft remoting through California. Let's come up on that conversation live.

Houston Cap Com .... Laredo is very good. Be advised that they will have 4 smoke pots there today. There will be one on the northwest corner, and 2 on the northeast corner, and then another one about three-quarters of the way between the northwest and the northeast corner so that you should have a nice line across the northern border of the acquisition target. Be advised that the wind is blowing from the South-Southeast so that the smoke should be blowing away from the targets and we hope they provide adequate visibility for early acquisition.

Cooper Okay.

Houston Cap Com We'd also like to inform you that the Laser will be on at White Sands, but it has no priority compared to the Laredo pass, we are mostly interested in Laredo pass.

Cooper All righty.

Houston Cap Com We would also like to have you bring your C-band adapter beacon up now. We would like for you to place the switch to Continuous.

Houston Cap Com Gemini V, Houston. We would also like to advise you that we will be updating and reloading your TR over Texas. We would like to get a bias check on your TR so you will get some DCS lights.

Cooper Okay, fine.

Gemini Control here. Very little conversation here. We are assuming that the Pilots are looking for that Laser out near White Sands, they are coming up right over the White Sands area right now. We will stand by here.

Houston Cap Com Gemini V, are you drifting around in the proper direction here.

Cooper Gemini V, affirmative.

Houston Cap Com Very good. When you have completed the SAD-13 pass, give us a call. We have some other information for you.

Cooper Okay.

Houston Cap Com Gemini V, we would like to have you place your C-band adapter switch to command at this time.

Conrad Gemini V, go ahead.

Houston Cap Com Roger, this is Houston. We would like to have you place your C-band adapter switch to command.

Conrad We did. It was somebody else calling us.

Houston Cap Com Roger.

Cooper We have White Sands in sight. I'm looking at it as we go by.

Houston Cap Com Roger, you see White Sands. Do you see the Laser?

Cooper — I see the sled track, I guess that is still at White Sands.

Houston Cap Com — Roger.

Cooper — I don't see any light at all.

Houston Cap Com — Okay.

5 NASA 902 — 5 NASA 902, do you read?

Conrad — Hello NASA 902, Gemini V reads you weak but clear.

Conrad — We have Laredo in sight, you can see the smoke from it very clear.

Houston Cap Com — Okay, the -- does the smoke outline the northern boundary for you, does it help with your orientation of which direction the target is from?

Conrad — Yeah, I can't see the targets yet because of the sun angle.

Houston Cap Com — Okay.

Conrad — In fact, I might not be able to see them at all, Gordo will probably be able to see them because we are not cleared out of the left yaw.

Houston Cap Com — Okay.

5 NASA 902 — Gemini V. Do you read NASA jet 902?

Conrad — Roger 902, Gemini V reads you.

Cooper — I have the targets in sight.

Houston Cap Com — Roger.

5 NASA 902 — Hello Gemini V. Do you read NASA jet 902?

Conrad — Okay Houston. Gemini V. We got a 4 and a 1 on the first row, and then we lost track because of yaw.

Houston Cap Com Okay, you got a 4 and a 1. Were those the first one and the second one, or were they some other ones in that first row?

Conrad The first and the second.

Houston Cap Com Okay. Very good.

Conrad NASA 902, Gemini V. Do you read?

Houston Cap Com Gemini V, Houston. We are all set to send up the TR time.

Cooper Roger.

Houston Cap Com Could you look at your stowage for reentry and sort of give us a quick appraisal of what you plan on doing, if you plan on doing something different than your preflight plan stowage?

Conrad The only thing different that we may do is, that we may have to have one or two food bags in the foot well. The thing -- we will have the two alpha bags with a food bag each wrapped in them in the right foot well. And I believe that we will make it into the proper place with just about everything else.

Houston Cap Com Okay fine. If you have any real drastic changes, let us know as soon as you can so we can figure it into the CG.

Conrad Okay, I don't really think so Jim. We are in pretty good shape and we are going to work on that this afternoon.

Houston Cap Com Okay, very good.

Conrad There is one change. We'll take the little bit of gear that was in the wing boxes out and carry it on our person and use that as extra storage area for food bags.

Houston Cap Com Okay, very good.

Houston Cap Com Gemini V, Houston again. We'd like to remind you to purge the fuel cells before you power down.

Conrad Roger. We are still planning on powering down 16 20 00.

Houston Cap Com Roger, and we'd also like to have you read out your propellant quantity gauge to us at this time.

Conrad Okay, stand by.

Cooper The propellant quantity reads about 7 percent.

Houston Cap Com Roger, 7 percent. We want to do some radar tracking with Pretoria on this pass and we would like to have you turn your C-band adapter beacon on and off at these times. Are you ready to copy?

Cooper Roger.

Houston Cap Com Okay, we want you to go to Continuous at 07 16 31 00, we want you to go back to Command at 07 16 42 00.

Conrad Roger, I copied. 07 16 31 00 Continuous, 07 16 42 00 Command.

Houston Cap Com Roger. Be advised also that we would like to run another HF test out of the Eastern Test Range antennas, so after

we have completed the State side pass, we'd like to have you go to HF and we will start the music up again and we'd like to see if we can compare today's results with yesterdays. We thought that that was about the best HF test we have done so far.

Conrad — I think you are right, and we'll mark the time down that we lose the signal.

Houston Cap Com — Okay, we are going to be going over the Canaveral antenna and then we are going to shift down to the Antigua antenna and then we are going to leave it at Antigua until you lose it.

Conrad — Okay. We'll give you a call at either the RKV or CSQ tonight after we get the stowage all done.

Houston Cap Com — Okay, very good.

Conrad — We are going to take a little nap and then go to work on it.

Houston Cap Com — Okay, and we are allowing you between 3½ and 4 hours for your stowage tomorrow prior to retrofire.

Conrad — We are going to have all the hard articles stowed, the only .....

Houston Cap Com — Gemini V Houston.

Conrad — Go ahead

Houston Cap Com — Okay, you cut out. You said you were going to have all the hard articles stowed before then, is that right?

Conrad We are going to give it a try.

Houston Cap Com Okay, very good. Would you put your cryogenic gauging switch to off, please.

Houston Cap Com Gemini V, Houston again.

Conrad Go ahead.

Houston Cap Com We definitely want you to be in UHF over the CSQ. Do you have the acquisition time there?

Conrad Would you please give it to us.

Houston Cap Com Right. The acquisition time there will be 07 17 02 42.

Conrad Okay.

END OF TAPE

Houston Cap Com Gemini V, Houston. We have about another 4 minutes here. We'll just stand by in case you have anything.

Cooper Okay, it sure is a pretty day down over the Caribbean today.

Houston Cap Com Say, would you like to describe some of the colors of the water down there. Do you see any shelves that go from green to blue or anything.

Cooper I'll say. There is a real brilliant green and a bright, bright blue. We came over Cuba, South America is again fairly cloudy.

Houston Cap Com Roger. Can you see any real sharp breaks in the color down below the water?

Cooper Yeah, very clearly. We are coming in over South America now.

Houston Cap Com Roger. Can you see the storm out there at all?

Cooper Yeah, just out to our left.

Houston Cap Com The name of that is Betsy in case you haven't been told about it.

Gemini Control here. We are standing by here for the resumption of another HF test in which music will be played. You heard the pilots say they would log how far from the Cape and the Eastern Test Range antennas they can read the HF signal. Over Texas, Pete Conrad reported he saw 2 squares, he read a 4 and a 1. The one reference indicates a vertical line up north and south through the center of the square, and the number

4 reading indicates a slant line beginning in the upper left of the square and running to the lower right. We are checking with our experimenters staff's port room to see if those were read accurately. Now there goes the music and we will all have a listen. (Music starts)

END OF TAPE

Gemini Control here; 171 hours and 27 minutes into the flight. Some 6 minutes ago, 7 minutes ago the Gemini 5 spacecraft, while in contact with the Hawaii station, logged its 3 millionth mile. The time on that was 171 hours and 20 minutes. The network controller, Ernest Randall, this morning has been in contact with Navy officials on the west coast, and we are attempting to arrange some sort of a patch with the sea lab, the divers, including Scott Carpenter, who went down yesterday off the coast of La Jolla. We don't know whether we're going to be successful or not today. We're talking in terms of making an attempt, and in about 3 hours from now we may remote the signal through Hawaii if the passes are not coming too close to the coast, as they won't 3 hours from now. Again, we are not certain we can undertake the sea lab pass today, but we are making an attempt right now to make a line arrangement to do it. We have the tape from Hawaii for you and we'll play it for you at this time.

Hawaii Cap Com — Turn your quantity read switch to fuel cell H_2.

Conrad — Roger.

Hawaii Cap Com — And leave it there for Guaymas.

Conrad — OK.

Hawaii Cap Com — Now we've got a medical data pass scheduled on the command pilot. Is he asleep, or is he about to go to sleep?

Conrad — Yeah, he's asleep. Do you want him?

Hawaii Cap Com — No, we don't want you to wake him up. We'll scrub that data pass if he's sleeping.

Conrad — Yeah, he's asleep.

Hawaii Cap Com	I've got an update for you if you are ready to copy.
Conrad	Ready to copy.
Hawaii Cap Com	MSC 1172000. 've already passed it by, Pete. Place your ECS central circuit breaker to open and hold it momentarily.
Conrad	Do what?
Hawaii Cap Com	Turn the ES central circuit breaker to open and hold it momentarily.
Conrad	OK. OK, it's open. Do you want it closed?
Hawaii Cap Com	Roger. Close it.
Conrad	OK, it's closed. How's that?
Hawaii Cap Com	That's OK.
Conrad	You just want one orbit on that, don't you?
Hawaii Cap Com	Roger, that was on this rev. It was on this rev, Pete.
Conrad	OK. I've got something for you to copy.
Hawaii Cap Com	Go ahead.
Conrad	OK, we lost HF at 07162700.
Hawaii Cap Com	Roger.
Conrad	And I'll give you Gordo's, he ate a meal, 5 Alpha, at 071[illegible]00.
Hawaii Cap Com	Roger.
Conrad	And his total water is 31 pounds, excuse me, 32 pounds, 8 ounces.
Hawaii Cap Com	Roger. Houston flight, Hawaii Cap Com.

Houston Cap Com — Go ahead.

Hawaii Cap Com — OK, it's ... on this message of instruction. What was the purpose of this ECS central circuit breaker to open?

Houston Cap Com — I asked the same question, and all I know is that's what they wanted done.

Hawaii Cap Com — OK, we had them do it, but I don't know why, and I missed the time on it. I thought that was for the next rev. I got this thing in kind of late.

Houston Cap Com — That's OK. Hawaii, would you get us an onboard hydrogen read out, and give us your read out of the battery temperature, BF01.

Hawaii Cap Com — Roger. Could you give us fuel cell hydrogen read out, please? We've had LOS, flight.

Houston Cap Com — Roger.

END OF TAPE

Gemini Control Houston here, 171 hours 45 minutes into the flight. We have just completed a rather long swing down the West Coast of North America and we have some 11 minutes of conversation to play for you. One or two other items during the pass, our Guidance and Navigation Controller reported that his gauges showed a little more than 6 pounds of fuel remaining onboard. A little more than 6. No new difficulties were reported in the thrusters or no difficulties in maintaining attitudes. Of course, that problem was vastly simplified several revs ago when the hydrogen in the fuel cell, hydrogen stopped venting. On another matter as to the prime recovery vessel, the Lake Champlain is still out in the area of -- just a little bit north of the 107 pickup point. We expect it may be 2 to 3 hours from now before any firm decision is made dispatching that ship either to the north or to the south. To the north of course, would be the 121 recovery area, to the south it is the 122 recovery area. The best estimate right now is sometime around 3:00 o'clock a decision would be made and the ship would be advised. We have the tape now of the State side pass and we will play it for you now.

Houston Cap Com Gemini V, Houston.

Cooper Go ahead, Houston.

Houston Cap Com On that last pass over the States it looked like you might have tried to start up your thrusters numbers 7 and 8 from the TM data. If you did, we'd like to know how they work?

Conrad Same. Same.

Houston Cap Com Okay, got you. The Flight Surgeon would like to talk to you for a minute here and then we will release you to Guaymas and they will finish up the pass.

Houston Surgeon Hello, Pete. I'd like to check with you a minute about this stowage that you are going to do this afternoon. Would you be sure and check on that reprogramer and make sure you have that out some place where you can get ahold of it rapidly on the water when you are planning your stowage. Secondly, we will -- I will talk with you tomorrow morning and give you a briefing on how we are going to get the BP's and we are checking that out down here now, how we will do them during the retrofire and the landing sequence. I'd like for you and Gordo to both be thinking about -- we will have to do some discussing about whether we do want you to, or whether you feel there is any need to use any of the item B, so you might consider that between now and tomorrow and depending on how things go with sleep the rest of the time. Do you know of anything that's really been bothering Gordo with trying to get sleep, like last night?

Conrad No. We were just busy, that's all.

Houston Surgeon Okay. Pete, your water intake has been down some to both of you. We are not concerned about it or anything, but it has gone down some from what you have been doing the rest of the flight. It has gone down some in the last 24 hours and you both might watch that some, too.

Conrad — Okay. Things have been running fairly cool in here and as you noticed, we have actually heated the suit loop up, and I think that -- we discussed that also and I think that is the reason.

Houston Surgeon — Rog. I think so. And I think you still sound like you are pretty well plugged up. Do you feel that you are up there.

Conrad — No, no. It's just that 100 percent pure oxygen, that's all.

Houston Surgeon — Okay, listen, there is another one you can consider, you and Gordo both between now and entry, if you both feel that you are pretty plugged up, you ought to consider this business about item E for the stuffiness and we can look at it later this afternoon or this evening and check again.

Conrad — Okay.

Houston Surgeon — Very good. Everything looks good down here, Pete, as far as your data. All of the sensors are still working very well. The data is as clean as it was at prelaunch, it looks real beautiful, your rates and things are leveling out pretty well and we have no concern from the medical point of view down here.

Conrad — Okay, we feel real fine.

Houston Flight — Guaymas, Houston Flight.

Guaymas Cap Com — Go ahead.

Houston Flight — Tell him to leave that section 2 on for the rest of the flight.

Guaymas Cap Com — Roger.

Guaymas Cap Com	Gemini V, Guaymas Cap Com.
Conrad	Hello there Guaymas, this is Gemini V.
Guaymas Cap Com	You are looking pretty good down here. How are you doing.
Conrad	We are go up here, Gemini V.
Guaymas Cap Com	Okay, we decided to leave the section two on for the remainder of the flight.
Conrad	Okay, very good.
Guaymas Cap Com	Roger.
Guaymas Cap Com	Flight, do you want to leave them in fuel cell H_2 quantity?
Houston Flight	Until you get a readout at Texas.
Guaymas Cap Com	Okay.
Conrad	Hey Guaymas, would you tell Houston that we didn't come close enough to Betsy to get an S-7 run. It moved quite a bit east of our track.
Guaymas Cap Com	Not close enough to where?
Conrad	It had moved east of our track.
Guaymas Cap Com	Okay, I understand. Flight did you get that.
Houston Flight	Roger.
Houston Flight	Guaymas, you can have him turn the hydrogen switch off.
Guaymas Cap Com	Roger.
Guaymas Cap Com	Okay, turn your quantity read switch off at this time.
Conrad	Roger.
Guaymas Cap Com	Okay, we copied.
Houston Flight	What did you read there Guaymas?

Guaymas Cap Com PCM bit count 41.

Houston Flight Roger, that's what we got.

Guaymas Cap Com Quite a difference in that TM, Flight, now that we are not tumbling.

Houston Flight Roger.

Houston Flight Ask him what his rates are now?

Guaymas Cap Com What kind of rates are you having there now?

Conrad Very, very, very low.

Guaymas Cap Com It sure does help on the telemetry. Real Good.

Conrad You said what?

Guaymas Cap Com It really has given us much better telemetry.

Conrad Oh yeah, we are hardly moving at all now that the hydrogen has stopped venting.

Guaymas Cap Com Guaymas has LOS.

Houston Cap Com Gemini V, Houston.

Conrad Go ahead Houston.

Houston Cap Com Pete we are looking at the preparation for retrofire for tomorrow and it looks like the most straight-foward way is to arm the RCS and have you do the platform alinement in RCS, and unless you have some objection to that we'll go ahead and sort of plan on that as far as the procedure down here.

Conrad No, we come to that.

Houston Cap Com Okay, very good. We'll look into it and try and get a time on it. Looks like it really won't make much difference from TR minus 30 on down and we'll just do a few things from TR minus 2 hours down to TR minus 30.

Conrad Okay, TR minus 30 is over Carnarvon, or past Carnarvon?

I'm not sure of that.

Houston Cap Com Just a second -- it's over Carnarvon. Did you get that, it is over Carnarvon at TR minus 30.

Conrad Yeah, I got that.

Houston Cap Com Okay.

Conrad That's the only thing I can see is when we go through the power up checkoff list after the platform warms up we go ahead and arm the RCS early, that's all.

Houston Cap Com That's right.

Conrad Otherwise, it ought to be about the same.

Houston Cap Com That's right. That's why I say there are very few things that are definite. We are just trying to line it all up here to make sure, if there are any differences, we'll let you know about it.

Conrad Okay.

Houston Cap Com We were planning on just telling you a little summary of what we had here and we are going to figure it all out, and we shouldn't have any changes at all, except for that one little thing we have already mentioned.

Conrad Okay. [illegible] by my calculations, ought to be somewhere around 08 [illegible] 25 or so.

Houston Cap Com Rog. I th[illegible] we've got you over Carnarvon at 08 13 33 00. Is that what you are talking about? Are we still talking to you.

Back to Gemini Control. In the discussion between Pete Conrad and and Dr. Berry, you heard reference to item B, item B or Bravo is a dexedrene preparation and another reference to item E, as in Eddie, item E is a nasal decongestant. A nasal decongestant which might be needed as the 100 percent oxygen atmosphere seems to have a drying effect on the nasal passages.

END OF TAPE

Gemini Control, Houston here; 172 hours, 32 minutes into the mission. The CSQ has just been in conversation with the flight director here. They are standing by and should acquire in a very few minutes. They are due to acquire at 35 minutes after the hour. We also have in front of us a large map the retro officers provided which spaces out the flight paths of orbits 121 and 122 tomorrow morning, excuse me revolutions. If we land in the 121-1 area, which is a spot about half way between the Cape and Bermuda, the spacecraft would come over the west coast of Mexico, start across the States at 6:37 Central Standard Time. At 6:39 it would be roughly over El Paso; at 6:41 it would be between Abilene and Fort Worth; at 6:43 it would be a very few miles east of Jackson, Mississippi; at 6:44 it would be almost precisely over Columbus, Georgia; at 6:45, just a few miles east of Savannah, Georgia, with an impact at 6:55 a.m. On the next rev, 122-1 landing area, we would begin to cross the California coast at 8:11 a.m.; at 8:13 we would be just west of the town of Denning, New Mexico; we would proceed, at 8:14 we would be slightly east of El Paso; at 8:15 almost over San Angelo, Texas; a minute later the spacecraft would be just to the east of Bryan; then New Orleans at 8:17; at 8:18 it would be half way across the arm of the Gulf of Mexico between Florida and New Orleans; at 8:19 it would be over St. Petersburg, and with an impact time of 8:30, impacting at 72 degrees west longitude, 23½ degrees north. This is Gemini Control.

END OF TAPE

Gemini Control Houston here, 172 hours 46 minutes into the flight. We have just made a pass over the Coastal Sentry Quebec and that signal, a very clean one, relayed back to the States by a Syncom is ready for you now. It is about a 4 minute conversation. Some 5 minutes from now, the spacecraft will swing north of Hawaii and we are due for a medical data check there from the Command Pilot. Let's find out now what went on over the CSQ.

CSQ Cap Com — Gemini V, CSQ Cap Com.

Cooper — Hello CSQ, Gemini V here.

CSQ Cap Com — Roger. We have you go on the ground and be advised that the Command Pilot has a medical data pass at Hawaii, acquisition time 18 54 11. Do you copy?

Cooper — Roger 18 54 11 medical pass, and who is that for?

CSQ Cap Com — That is for the Command Pilot. I also have a flight plan update when you are ready to copy.

Cooper — Could you wait a second. Go ahead.

CSQ Cap Com — Roger, D-4, D-7, sequence 426, it is to be done when both crew members are awake. Do it in drifting flight and use the recorder. The D-6 experiment, expend remaining film on features of opportunity. Do you copy?

Cooper — Roger.

CSQ Cap Com — CSQ has nothing further this pass. We are standing by.

Cooper — Okay, fine, Gemini V here.

Gemini Control here; 172 hours, 54 minutes into the flight, and as we have been talking Hawaii acquired. Let's cut in on that conversation.

Houston Cap Com	...we are sure he is going to be awake.
Hawaii Cap Com	Roger, flight. Gemini 5, Hawaii. We do not have a valid temperature. Gemini 5, Hawaii Cap Com.
Conrad	Go ahead, Hawaii.
Hawaii Cap Com	We do not have a valid temperature yet.
Conrad	It's coming.
Hawaii Cap Com	Roger. Flight, this is Hawaii. ... good.
Hawaii Surgeon	Gemini 5, Hawaii Surgeon. We have a valid blood pressure. Give us a mark when you begin exercise.
Conrad	Roger.
Hawaii Cap Com	Flight, we are copying dump.
Houston Cap Com	What did you say, Hawaii?
Hawaii Cap Com	We are copying dump.

This is Gemini Control. That appears to be all the conversation we'll have on this pass. This is Gemini Control out.

END OF TAPE

Gemini Control here; 173 hours, 2 minutes into the flight. We have just completed a medical data pass over Hawaii, and Gordon Cooper reported his total water intake was now 34 pounds. He said he finished his last meal about 3 hours ago. It was 5 Alpha. The Rose Knot Victor should raise the spacecraft in about 15 minutes, and the flight plan at this point is mostly all white space. They have just about wrapped up all their experiments. They have a few to do tomorrow morning before re-entry, but the flight plan itself is as barren as we've seen it. It just shows items like briefing period, pilot eat, command pilot eat, medical data pass here and there, and that's about the extent of it, continuing in drifting flight. This is Gemini Control, Houston.

END OF TAPE

This is Gemini Control at 173 hours and 32 minutes into our Gemini 5 mission. The spacecraft has just begun its 110th revolution around the earth. At the present time it is over the south Atlantic off the east coast of South America. Here in the Mission Control Center we have had a change of shift, with the White Team of flight controllers taking over from Chris Kraft and his Red Team. As Doctor Charles A. Berry, our flight surgeon, left the Control Center, he advised us that the flight crew, Gordon Cooper and Pete Conrad, are still in excellent physical condition, and that during our last voice communication with the crew over the RKV tracking ship, both were awake, and they did sound cheerful and in good spirits. We are now 173 hours and 32 minutes into our flight. Here is the taped voice communication between the Rose Knot Victor tracking ship and spacecraft Gemini 5.

RKV Cap Com — Gemini 5, RKV Cap Com.

Conrad — Go ahead, RKV.

RKV Cap Com — Roger. We would like for the pilot to be awake if possible over CSQ Hawaii on the 110th rev.

Conrad — OK. What's the acquisition?

RKV Cap Com — CSQ acquisition is at 2009, 2009. That's your up-coming rev.

Conrad — OK, I'll be up.

RKC Cap Com — And what we'd like to do, we're going for...thruster check, and we want to give you the instructions on this rev over the CSQ in Hawaii to perform the test on the next rev over the CSQ in Hawaii.

Conrad — OK.

RKV Cap Com — We have all your systems real good here on the ground. Everything looks fine.

Conrad — OK, we're go up here.

RKV Cap Com — Roger. We have nothing else for you. We'll be standing by.

Conrad — OK.

Houston Cap Com — RKV, Houston Flight.

RKV Cap Com — Flight, RKV.

Houston Cap Com — Tell Pete he can go to sleep for the next rev and Gordo could take down the instructions, then Pete could be up for the pass over the CSQ in Hawaii for the actual test.

RKV Cap Com — Roger. Gemini 5, RKV Cap Com.

Conrad — Go ahead.

RKV Cap Com — Flight advises that if you want to sleep for the next rev, you can go ahead and the command pilot can take down the instructions and then you can be awake to do the test. Most of the switches are on your side of the cockpit. That's the problem.

Conrad — Well, listen, we're working on....and a lot of things like that.....We'll probably.....your way for the next couple of rounds.

RKV Cap Com — Roger, understand.

Houston Cap Com — Very good.

END OF TAPE

This is Gemini Control at 174 hours and 2 minutes into the flight of spacecraft Gemini 5. At the present time our spacecraft is coming up over the Philippines on the 110th revolution and will very shortly be over the Coastal Sentry Quebec, our tracking ship located in the Pacific south of Japan. Our flight status at this time is essentially unchanged, as it has been over the past 16 hours. The spacecraft is in drifting flight and the flight crew are in excellent physical condition. This is Gemini Control; 174 hours and 2 minutes into our mission.
END OF TAPE

This is Gemini Control at 175 hours and 32 minutes into the flight of spacecraft Gemini V. At the present time our spacecraft is on its 111 revolution over the earth and at the present time is passing over the Indian Ocean. Our last voice communications were made with spacecraft Gemini V as it passed over the Coastal Sentry Quebec and over the Hawaiian tracking station shortly thereafter. This was approximately 40 to 45 minutes ago. At that time, Flight Director, Eugene Kranz, passed on instructions to the spacecraft crew to have a procedures check of thrusters 7 and 8 and a plan to heat up the thruster chamber assembly through a series of switching maneuvers or switching of procedures in the spacecraft cockpit and this particular attempt to heat up the thrust chambers will take place as spacecraft Gemini V moves again over the Coastal Sentry Quebec tracking ship and we expect to get some information as to whether it was successful after the maneuver or switching procedure is completed. The spacecraft Gemini V also received a map update and some instructions on medical passes to be performed. This is Gemini Control at 175 hours and 33 minutes into the mission. We now bring you a voice transmission between spacecraft Gemini V and the Rose Knot Victor, our tracking ship off the West Coast of Peru.

RKV Cap Com — Gemini V, RKV Cap Com.

Cooper — Go ahead.

RKV Cap Com — Did you turn Acq beacon circuit breaker off over us?

Cooper — Yes we did. We were late, I know.

RKV Cap Com — Okay. It was on when we got acquisition and it went

off during our pass, and we were wondering if you were conducting your MSC-1 or what happened?

Cooper Right, we are entering MSC-1 right now.

RKV Cap Com Roger, understand. I can ...(faded out) Turn your Commanding real time off.

END OF TAPE

This is Gemini Control at 176 hours and 2 minutes into the flight of spacecraft Gemini 5. Our spacecraft at the present time is on its 111th revolution around the earth and is approaching now the Hawaiian tracking station in the Pacific Ocean. We had voice conversation with spacecraft Gemini 5 over the Coastal Sentry Quebec tracking ship a few minutes ago. At that time both members of our flight crew were awake and Pete Conrad did the talking. There was an attempted thruster check and an attempt to fire the thrusters in sequence which was designed to try to unfreeze thrusters 7 and 8. Pete Conrad reported that during sequence thruster firing, he built up some fairly high rates, and he would then have to damp them out. That conversation came just shortly before loss of signal, and we did not get word on whether thrusters 7 and 8 did fire. At this time we expect to get further word as the spacecraft passes over the Hawaiian tracking station. We are now 176 hours and 3 minutes into the flight of Gemini 5. We will now play back the taped conversation between the Coastal Sentry Quebec and Pete Conrad, aboard spacecraft Gemini 5.

Conrad	CSQ, CSQ, Gemini 5.
CSQ Cap Com	Gemini 5, CSQ. Read you loud and clear. We have you go on the ground.
Conrad	.....Garbled.....
CSQ Cap Com	Negative, all we got was a lot of noise on HF.
Conrad	.....build up some high rates, but we'll damp them out when we get through with them.
CSQ Cap Com	Roger. CSQ copy. Houston, CSQ.
Houston Cap Com	Go ahead.

CSQ Cap Com	Did you copy that (interrupted by Conrad)
Conrad	.....
Houston Cap Com	Go ahead and finish the tests....we'll take up with you later.
CSQ Cap Com	Gemini 5, CSQ. Say again.
Conrad	Roger. Atomic control is holding at 23.1.
CSQ Cap Com	Roger, copy. Gemini 5, CSQ requests you place the quantity read switch to the fuel cell H_2 position.
Conrad	Roger.
CSQ Cap Com	....CSQ. Did you turn.....left circuit breaker on and off? Over.
Conrad	Yes, we did, but we got no, negative results.
CSQ Cap Com	Very good. TX transmitted.
Houston Cap Com	CSQ.....don't forget the medical data pass over Hawaii.
CSQ Cap Com	Roger. Gemini 5, CSQ. Want to remind you that the pilot has a medical data pass over Hawaii, and you can place the quantity read switch off.
Conrad	Roger. Do you have the acquisition for Hawaii, please?
CSQ Cap Com	Roger,220246 and we will monitor HF. CSQ is LOS.
Houston Cap Com	Roger. CSQ A and D, how far did he say he got through the check?
CSQ Cap Com	How far did he get through the check, is that your question?
Houston Cap Com	Yes, sir.
CSQ Cap Com	He was attempting to, it looked like he was attempting to fire 7 and 8 thrusters at about 47. He turned

the circuit breaker on and off, and then at about 4:30 he tried it again. Then we monitored him in a direct mode, and it looked like possibly he was trying to damp his rates. Some of the other thrusters were firing. We didn't get any of the results of the test. Over.

Houston Cap Com OK, what did he say about build up of rates?

CSQ Cap Com When we acquired him he said he had built up some....rates.

Houston Cap Com OK. That's all he offered then on the tests, huh?

CSQ Cap Com That's affirmative. He didn't give us any results at all. It appeared that he might have been trying to damp out his rates prior to LOS. He had some of the other thrusters firing, and he was in a pulse mode.

Houston Cap Com OK.

END OF TAPE

This is Gemini Control at 176 hours and 32 minutes into the flight of spacecraft Gemini V which is at this moment passing over the Southern part of South America and beginning the 112th revolution over the earth. We had a voice conversation with Spacecraft Gemini V over Hawaii. In discussion with the Command Pilot Gordon Cooper concerning the attempt to refire, or fire the thrusters that had been frozen obviously or evidentally on tests was not successful. Command Pilot Cooper also advised that the rates of the spacecraft at this time are completely acceptable. Our Flight Director Eugene Kranz has noticed on his trend charts that the hydrogen pressure seems to be building up again. He has instructed the spacecraft crew to power up the platform to prevent hydrogen from beginning to vent again. Our Flight Surgeon, Dr. Duane Catterson, has recommended to the crew that concentrate on water, food, and sleep for the next 10 hours. This is Gemini Control at 176 hours and 33 minutes. We will now play the taped voice communication between spacecraft Gemini V and the Hawaiian tracking station.

Hawaii Cap Com — Gemini V, this is Hawaii Cap Com.

Cooper — Roger Hawaii, Gemini V here.

Hawaii Cap Com — We have a valid temperature. Standing by for blood pressure.

Cooper — Okay.

Hawaii Surgeon — Gemini V, Hawaii Surgeon. Your cuff is full scale.

Hawaii Cap Com — Transmitting TX.

Houston Flight — Roger.

Hawaii Surgeon — Gemini V, we have your valid blood pressure. Give me a mark when you begin your exercise.

Conrad	Mark.
Hawaii Cap Com	He's looking good on the ground, Flight.
Houston Flight	Roger, Hawaii.
Hawaii Surgeon	Gemini V, Hawaii Surgeon. Your cuff is full scale.
AFD	Hawaii, AFD. Have you commanded tape dump?
Hawaii Cap Com	That's affirmative. A wrong time. 176 03 30.
AFD	Roger.
Hawaii Surgeon	Gemini V, Hawaii Surgeon. We have a good blood pressure, standing by for your water report only.
Conrad	Roger, wait one. 34 pounds 8 ounces.
Hawaii Surgeon	Roger Gemini V. Thank you and happy landing to you and Gordo tomorrow. Hawaii surgeon out.
Conrad	Roger. Thank you.
Cooper	Roger. Thank you.
Hawaii Cap Com	Gemini V, Hawaii Cap Com. I'd like a readout on your onboard quantity, source temperature and source pressure for the OAMS?
Cooper	Roger. Our onboard quantity is about 6 percent, temperature is 50 degrees, and source pressure is 1000 psia.
Hawaii Cap Com	Roger. I understand. Copy Flight.
Cooper	You want the results of our little test that we did?
Hawaii Cap Com	That's affirmative. We'd like to know what you did there.
Cooper	All right. We followed procedure to the letter and the first thing that we did was roll left pretty good and the gas started going out through the left yaw thrusters.

We got pretty good rates all certified. We held the thrusters on yaw left for 10 minutes, then we went to the other procedure for rearming and trying them and we still had no thrust.

Hawaii Cap Com Roger, I understand.

Cooper In the mean time we have discovered that we don't have the number 1 thrusters are out, so we are getting down with just very few thrusters left on the OAMS system.

Hawaii Cap Com Do you happen to know the numbers of the ones that failed?

Cooper No, we were unable to get any left roll, with the roll jets and the yaw logic.

Hawaii Cap Com Roger, I understand that.

Cooper Just a minute let me recheck that. It was roll logic in, that's right. Left roll only with the roll logic switch in the pitch and then no right yaw, then right yaw only with the roll logic in the yaw, but no left roll in that position.

Hawaii Cap Com Roger, I understand.

Cooper And the yaw is feeding through into the pitch, which means a very weak thruster on the right yaw also.

Hawaii Cap Com Okay.

Hawaii Cap Com Did you copy that, Flight.

Houston Flight Affirmative.

Hawaii Cap Com Telemetry off.

Houston Flight What are ...

Cooper Other than that, it is a pretty good system.

Houston Flight What are his rates now. Is he pretty well damped?

Hawaii Cap Com Just a second, Flight.

Hawaii Cap Com What are your rates now, Gemini V. Are you pretty well damped out?

Cooper Roger. We have managed to switch back and forth and work on the few remaining thrusters and we have our rates damped pretty well now.

Hawaii Cap Com Roger.

Hawaii Cap Com Okay Gemini V. We have nothing further. Hawaii standing by.

That was voice communications taped between Gemini V and the Hawaiian tracking station and we will now give you the taped voice conversation between Gemini V and the Rose Knot Victor tracking ship.

RKV Cap Com Gemini V, this is RKV Com check. How do you read?

Conrad RKV, Gemini V. Read you loud and clear.

RKV Cap Com Roger, would you close your Acq beacon circuit breaker?

Conrad Roger.

RKV Cap Com Okay, and we'd also like you to bring up the platform at this time. The reason for this is that we might start venting H_2 and we want to prevent this. Right now hydrogen and oxygen pressure is low.

RKV Cap Com We show them powered up, Flight.

Houston Flight Roger.

RKV Cap Com You want to know the main?

Houston Flight Affirmative.

Conrad Okay, the platform is on at this time.

RKV Cap Com Roger.

Conrad Now what are you going to want us to do?

Houston Flight Just leave it up, we want to stay in a powered up state while we watch his ....

RKV Cap Com .... in the powered up position right now at the present time. We don't want you to do anything.

Conrad Okay.

RKV Cap Com We'd like to pass some information to you. We are going to cancel the medical data pass on the Command Pilot over the CSQ on rev 114.

Conrad .....

RKV Cap Com Okay and the Surgeons recommend that both of you concentrate on water and sleep for the next 10 hours.

Conrad Say, do you have an Acq time for that pass over the CSQ?

RKV Cap Com Roger. [illegible] on 114 is 02 28 26, and that medical data pass has been deleted.

Conrad Oh, you want it deleted?

RKV Cap Com That's affirmative.

END OF TAPE

This is Gemini Control at 177 hours and 2 minutes into the flight of spacecraft Gemini 5. At the present time our spacecraft is passing over the continent of Africa on its 112th revolution around the earth. Flight Director Gene Kranz, here in Mission Control Center, has made a decision to bring the spacecraft in on revolution 121 into the area designated 121-1 landing area, which is approximately 240 nautical miles southwest of Bermuda. The decision was made due to adverse weather in the 122-1 area where tropical storm Betsy, although moving now on an undetermined path, has a long range forecast that would place it in a much worsened condition and near the 122-1 area sometime in the next 24 to 36 hours. The decision now then has been made that spacecraft Gemini 5 will land on the 121st revolution in the area designated 121-1, 240 nautical miles southwest of Bermuda. In that area at the present time, the carrier Lake Champlain is steaming toward that target point. This is Gemini Control at 177 hours and 4 minutes into the mission.

END OF TAPE

This is Gemini Control at 177 hours and 32 minutes into the flight of spacecraft Gemini 5, which is now passing over the Pacific Ocean on its 112th revolution over the earth. At this time the Gemini 5 spacecraft is in drifting flight, its rates are damped out, and the platform is powered up to insure hydrogen venting does not reoccur. Flight Director Gene Kranz states that failure of additional thrusters on the Gemini 5 indicates that we may be running out of OAMS fuel. For that reason he has placed the spacecraft in the drifting flight mode, at least for the present, until the fuel load can be determined. The splash down of spacecraft Gemini 5 is scheduled for the 121-1 area. It is estimated to occur at 12:55 Greenwich time, or 6:55 a.m. Central Standard Time. The spacecraft will land approximately 276 statute miles southwest of Bermuda, at 29 degrees 43 minutes north latitude , and 68 degrees west longitude. Ken Nagler, now our Mission Control Center weather man, will give us an update on the weather in those landing areas. Come in, Ken.

Thank you, Al. Well, as most people know, this is tropical storm season, and all week we have been watching to see if something would crop up in the Atlantic, and yesterday tropical storm Betsy was located, just in time to give us some problems along revolution 122. So this is the current position according to the advisory put out by the Weather Bureau Office in San Juan. With this disturbed area something like this, moving in this direction, with the center of the storm expected in here, the, at least the eastern edge of area 122-1 would be awfully close to disturbed weather. So this is the reason why this area is a little bit risky to use for tomorrow. Now, with regard to 121-1, we also have a problem there. We are sort of being squeezed from a tropical storm moving this way, and

a cold front coming down this way with a band of shower activity out ahead of it. But by moving the recovery area a hundred miles or more to the east over to this new position here, this gets it well out of the way of the showers. So we expect the landing conditions to be very good in this area tomorrow morning. That's all from the Weather Bureau.

Thank you, Ken Nagler, our weather man; and this is Gemini Control at 177 hours and 34 minutes into the flight of spacecraft Gemini 5.

END OF TAPE

This is Gemini Control at 178 hours and 2 minutes into the flight of spacecraft Gemini V, which at this moment is passing within voice range of Rose Knot Victor, our tracking ship located off the west coast of Peru. It is on its 112th revolution and within a matter of moments will start the 113th revolution over the earth. As we reported on our last transmission, spacecraft Gemini V is due to splash down southwest of Bermuda, 276 miles, statute miles southwest of Bermuda, at 29 degrees and 43 minutes north longitude, and 68 degrees west latitude, at approximately 5 minutes to 7:00, central standard time, or, 12:55 Greenwich time. Retrofire will take place at 12;27 Greenwich time. At this time we are 178 hours and 3 minutes into the flight of spacecraft Gemini V. We now have for you the voice transmission between spacecraft Gemini V and the Coastal Sentry Quebec tracking ship.

CSQ Cap Com	Gemini V, CSQ Cap Com.
Conrad	CSQ, Gemini V, go ahead.
CSQ Cap Com	Roger, ..., also we would like you to put your quality read switch to the fuel cell hydrogen position please.
Conrad	Roger, we're at fuel cell hydrogen.
CSQ Cap Com	OK, Houston advises the fuel is possibly -- you will have sufficient time to . . . . . to the thrusters. They would like you to fire up again and go to false load, PCA circuit breakers 7 and 8 closed, rate gyros on, and again liquid thrusters. Over.

Conrad	You mean all thrusters or 7 and 8?
CSQ Cap Com	I believe he means 7 and 8, I'll check it.
CSQ Cap Com	Flight, CSQ.
Houston Flight	Go ahead
CSQ Cap Com	You want them to check thrusters 7 and 8. Is that affirmative?
Houston Flight	Well, we'd like them to check all thrusters, but I'd like to make sure 7 and 8 are closed during this check.
CSQ Cap Com	You want all circuit breakers on the thrusters closed.
Houston Flight	That's affirmative.
CSQ Cap Com	Roger
CSQ Cap Com	Gemini V, advise all circuit breakers on the thrusters closed. Check all thrusters.
Conrad	OK
CSQ Cap Com	Also, Gemini V, Houston advises there is sufficient hydrogen for the remainder of flight and no problem on water. Over.
Conrad	OK, they want us to leave the platform up all the time. Is that correct?
CSQ Cap Com	That's affirmative. Leave the platform on and after your thruster check turn the rate gyros back off.
Conrad	Roger.

Houston Flight	CSQ, please rebroadcast your alpha summary
CSQ Cap Com	Say your QT again.
Houston Cap Com	Please rebroadcast your alpha summary.
CSQ Cap Com	Copy.

END OF TAPE

This is Gemini Control at 178 hours and 32 minutes into the flight of our spacecraft Gemini 5. At the present time the flight crew is on its 113th revolution over the earth and is passing over the continent of Africa. In a pass over the Rose Knot Victor, our tracking ship off the west coast of Peru, just a short while ago Pete Conrad reported there was "no joy" on the attempts to fire thrusters 7 and 8. And as we had reported earlier failure of additional thrusters to fire properly indicates the spacecraft may be running out of OAMS fuel according to Gene Kranz our flight director. Therefore, he had advised the crew to go to drifting flight. The rates are damped out, and the platform is powered up to insure that hydrogen venting does not start again. Here in the Mission Control Center the scene is normal. Some of our flight controllers have started their evening meals. Others are relaxing at their consoles waiting for the next pass over the Coastal Sentry Quebec, the tracking ship which should be coming up in approximately 22 minutes. The room atmosphere here is relaxed and conversation at a low pitch. Aboard the spacecraft our crew had been advised by flight surgeon, Dr. Duane Catterson, to get as much rest as they can through the remainder of the flight and to drink a bit more water. Evidently, command pilot Gordon Cooper is taking that advice as our ground data indicates he is asleep right now. At this time we are 178 minutes and - 178 hours and 33 minutes into the flight of spacecraft Gemini 5. We now have for you the voice transmission between spacecraft Gemini 5 and the Rose Knot Victor, our tracking ship off the west coast of Peru.

RKV Cap Com Gemini 5, RKV Cap Com.

Conrad RKV Cap Com, Gemini 5 here. Read you loud and clear.

RKV Cap Com — Roger. Read you loud and clear also. All systems are go on the ground. We would like to advise you you have a UHF-6 over CSQ on rev 113.

Conrad — Roger. Rev 113. And be advised that we went back through the thruster checks again and ran them in direct and ran them in pulse and like we told you before, it's still the same.

RKV Cap Com — Roger. Is that enough for you, flight?

Houston Flight — That's affirmative.

RKV Cap Com — Okay. We'd like to have a fuel purge at this time.

Conrad — Roger.

RKV Cap Com — Give me a mark.

Conrad — Roger. Stand by. Mark hydro - Mark hydrogen number 2 on my mark - mark. Stand by for oxygen on number 1. Mark.

Conrad — Number 1 purge complete, commencing number 2.

RKV Cap Com — Flight, this is RKV.

Houston Flight — Go, RKV.

RKV Cap Com — Roger. We show circuit breakers for thrusters 7 and 8 are closed at the present time. You want us to open them?

Houston Flight — I don't think it makes any difference.

RKV Cap Com — Roger. Gemini 5, this is RKV. We'd like to know your platform position please. When you can give it.

END OF TAPE

This is Gemini Control at 178 hours and 54 minutes into our Gemini 5 flight mission. The spacecraft is now approaching the Coastal Sentry Quebec, our tracking ship in the Pacific Ocean south of Japan. Gemini 5 is on its 113th revolution over the earth. We expect to have voice communication with the tracking ship within moments. Let's listen for the live conversation now.

CSQ Cap Com — Gemini 5, CSQ Cap Com.

Conrad — Go ahead CSQ, Gemini 5 here.

CSQ Cap Com — Roger. Be advised that you are UHF-6, and we'd like you to place your quantity reswitch to fuel cell hydrogen position please.

Conrad — Roger. Switch to fuel cell hydrogen at this time.

CSQ Cap Com — Also, be advised that due to fog rolling on area 122-1 Flight has decided to commence to 121-1. We'll be updating your TR time.

Conrad — Roger. Understand 121-1 is to be the new recovery area.

CSQ Cap Com — Listen Gemini, I also have the coordinates if you're ready to copy.

Conrad — Roger. Okay, ready to copy.

CSQ Cap Com — Roger. 21 degrees, 43 minutes north, 68 degrees, 00 minutes west.

Conrad — Roger.

CSQ Cap Com — Transmitting TR.

Conrad — The TRC of 121-1.

CSQ Cap Com — Gemini 5, say it again.

Conrad — The TRC of 121 first please.

CSQ Cap Com — Roger. Stand by to copy. TRC - 01 29 45. RDC 403 20 plus 24.

Houston Flight — CSQ Cap Com, you gave them the wrong TR - you gave them 114 delta.

Conrad — (Garbled) . . . Would you give me the TNTRC of 121-1.

CSQ Cap Com — Roger. Disregard what I gave you. The TNTRC is 12 plus 27 plus 39.

Conrad — Okay. 12 plus 27 plus 39.

CSQ Cap Com — That's affirmative. RET 403 14 plus 08.

Conrad — I'm sorry, you're cutting in and out. Say it again.

CSQ Cap Com — Roger. RET 403 is 14 plus 08.

Conrad — Okay, I got it.

CSQ Cap Com — RETRV 19 plus 30.

Conrad — Roger. Could you tell us what the recovery force is? Will the carrier be there?

Houston Flight — That's affirmative. The carrier will be there.

CSQ Cap Com — The carrier will be there, and I have the extension with it in that area. Over.

Conrad — Mission copied.

CSQ Cap Com — Roger.

Cloud cover - five tenths - 2000 foot scattered - 10 miles visibility - 1230 degrees - one or two knots - wave height 2 to 3 foot - water temperature 82 degrees.

Conrad — Sounds pretty good to me.

CSQ Cap Com — Roger. Gemini 5, we'd still like to know your. . .

Conrad Roger. . . . . .

CSQ Cap Com Copy . . . . . .

Houston Flight CSQ Cap Com, did you get your TR in, and is it in sync?

CSQ Cap Com Roger. I have the TR in and it's within one-quarter second.

Houston Flight Roger.

CSQ Cap Com Gemini 5, be advised we have our TR on clock.

Conrad Roger. Understand TR is in sync. And you may advise Flight that we'll be ready for 21-1.

CSQ Cap Com Roger. Copy. Gemini 5, you can return to the off position with your quantity read-out switch.

Conrad Roger. Would you give me a GMT?

CSQ Cap Com Roger, on my mark it will be 01 hours 00 minutes 25 seconds. 2 1 mark. Would you like. . . . . .

Conrad Garbled.

CSQ Cap Com Okay. We'll be coming up on 0 hours, 01 minutes, 00 seconds.

Conrad Roger.

CSQ Cap Com 5 4 3 2 1 mark. That was 01 hours, 01 minutes, 00 seconds.

Conrad Roger. We got it. Thank you.

CSQ Cap Com CSQ has LOS, Flight.

Houston Flight Roger, CSQ, well done.

CSQ Cap Com Not too well.

That was live voice conversation between the Coastal Sentry Quebec tracking ship and Pete Conrad aboard spacecraft Gemini 5. This was the

first word our spacecraft had received on the decision to land during the 121st revolution southwest of Bermuda. This is Gemini Control at 179 hours and 1 minute into the flight.

END OF TAPE

This is Gemini Control at 179 hours and 32 minutes of flight for the Gemini V mission. At the present time spacecraft Gemini V is ending its 113th revolution around the earth and is coming up on our Rose Knot Victor tracking ship located off the west coast of Peru. It will shortly start the 114th revolution. To give you a recap of our situation, our flight crew was advised that they will end the mission during revolution 121. That will be at 12:55 Greenwich mean time, or 6:55 a.m., central standard time. Actually, the retrofire will commence approximately 690 statute miles due north of Hawaii. That is the time of retrofire. Splashdown will occur at 12:55 Greenwich mean time, or 6:55 a.m., central standard time, during the 121st revolution. Landing will be 276 statute miles southwest of Bermuda at 29 degrees, 43 minutes north longitude, 68 degrees west latitude. We have a weather report for that area. The weather forecast is good with winds out of the southwest 12 knots, clouds scattered to broken at 2000 feet, visibility 10 miles, and wave height will run ... 2 to 3 feet. That is the weather forecast for the landing area tomorrow morning. This is Gemini Control.

END OF TAPE

This is Gemini Control at 180 hours and 2 minutes into the flight of spacecraft Gemini V, which is now on its 114th revolution around the earth, and at the present time is passing over the continent of Africa. Aboard our spacecraft, command pilot Gordon Cooper has awakened from his sleep period and pilot Pete Conrad should be sleeping now, according to our flight plan. The spacecraft is in drifting flight and powered down. The crew has been notified that their flight will end at 12:55 Greenwich mean time, that is 6:55 a.m., central standard time here in Houston, and splashdown will be 276 statute miles southwest of Bermuda. The city of Chattanooga, Tennessee has called us to advised they have conferred honorary citizenship on Gordon Cooper and Pete Conrad, and have named them "Brothers of the Brush." Chattanooga is celebrating the 150th anniversary of its founding and many of the residents there have grown beards to commemorate the event. They tell us the 8-day beards of Cooper and Conrad will amply qualify them for this elite society, Brothers of the Brush. We will pass on the message to the spacecraft at our earliest opportunity. Spacecraft Gemini V will be visible in the Houston area from 5:04 a.m. to 5:09 a.m., central standad time, Sunday, on its 119th revolution. It will come over the horizon at west-southwest, traveling east-northeast. At this time we are 180 hours and 3 minutes into the flight of Gemini V. We now have for you the voice transmission between spacecraft Gemini V and the tracking ship Rose Knot Victor on tape.

RKV Cap Com	Gemini V, RKV Cap Com. Contact, how do you read?
Conrad	RKV, Gemini V. Its loud and clear.
RKV Cap Com	Roger. Have a map update for you. Acknowledge when you are ready to copy.
Conrad	Ready to copy.
RKV Cap Com	Roger. Map 01 55 42, longitude 19 west, rev 114 star 01 55 42, 23 07 11.
Conrad	Roger
RKV Cap Com	Okeydoke. All systems are Go on the ground.
Conrad	All systems are Go up here.

END OF TAPE

This is Gemini Control at 180 hours and 32 minutes of flight for spacecraft Gemini V, which at this time is making its last pass over the Coastal Sentry Quebec, our tracking ship in the Pacific, located south of Japan. The revolutions from now through the end of this mission do not bring our spacecraft within voice range of Coastal Sentry on any further passes, and we are in voice communication from Coastal Sentry Quebec at this time, and we assume that they will be saying goodnight to our spacecraft crew and wishing them well. The next voice transmission we will have with the spacecraft Gemini V crew should occur over the Rose Knot Victor, the tracking ship off the west coast of Peru in approximately 30 minutes. During the pass over the Coastal Sentry Quebec, there was a spacecraft systems check and from the ground, all systems looked good. This is Gemini Control at 180 hours 33 minutes into the flight.

END OF TAPE

This is Gemini Control at 181 hours and 2 minutes into the flight of spacecraft Gemini 5. At the present time spacecraft Gemini 5 is passing over the Pacific Ocean and will shortly come up over the Rose Knot Victor, our tracking ship located off the west coast of Peru. During the last pass of spacecraft Gemini 5 over the Coastal Sentry Quebec, our other tracking ship which is located south of Japan, the tracking ship gave our spacecraft crew a go from the ground. At this time spacecraft Gemini 5 is coming up the end of its 114th revolution and within minutes will be starting its 115th revolution around the earth. We are now 181 hours and 2 minutes into the flight of spacecraft Gemini 5. We now have for you the voice transmission - the last voice transmission - between spacecraft Gemini 5 and the Coastal Sentry tracking ship.

CSQ Cap Com — Gemini 5, CSQ Cap Com

Conrad — Go ahead, CSQ, Gemini 5.

CSQ Cap Com — We have you go on the ground. We'd like to get a ground read-out of all your cryogenic quantities. Wil you select the ECS O_2 on the quantity read-out switch please?

Conrad — Okay.

CSQ Cap Com — And we'd also like to know if the total water consumption is close to mark please.

Conrad — 86. Command pilot's is 36 pounds.

CSQ Cap Com — Copy.

Conrad — Pilot's is 34 pounds, 4 ounces.

CSQ Cap Com — Copy. Will you select the fuel cell O_2 please.

Conrad — That's 35 pound 4 ounces . . . . .

CSQ Cap Com Roger. 35, part 4. Gemini 5, would you select fuel cell H_2 please.

Conrad Roger.

CSQ Cap Com Gemini 5, you can return to the off position quantity read-out switch. Houston, CSQ has Gemini 5 go and nothing further at this time.

Houston Flight Roger. Why don't you pass up your best wishes. This is your last pass I believe.

CSQ Cap Com Roger. Will do. Gemini 5, CSQ.

Conrad Go ahead, CSQ.

CSQ Cap Com Roger. This is the last pass as you come around. I hope you have a nice landing, and I'll see you in Houston.

Conrad Thank you. Thank you for all your help, you did a real fine job. Over.

CSQ Cap Com Thank you.

END OF TAPE

This is Gemini Control at 181 hours and 32 minutes into the flight of spacecraft Gemini 5. Our spacecraft has just recently begun its 155th revolution around the earth. At the present time it is just approaching the west coast of Africa. A short while ago as it passed over the Rose Knot Victor, our tracking ship located off the west coast of Peru, that tracking ship told the flight crew that everything looks good from the ground. They then updated the spacecraft star map, and sent the flight crew on its way. At this time we are 181 hours and 32 minutes into the mission of Gemini 5. We now have for you the voice transmission between spacecraft Gemini 5 and the Rose Knot Victor tracking ship.

RKV Cap Com — Gemini 5, RKV Cap Com.

Conrad — Go ahead, RKV, Gemini 5.

RKV Cap Com — Roger. Everything looks real good here on the ground. I have some landing area updates for you if you're not - acknowledge when you're ready to copy.

Conrad — Okay. Just one second and we'll be ready.

RKV Cap Com — Roger.

Conrad — Okay, we're ready to copy.

RKV Cap Com — Roger. The weather is good in all areas - it is day 8. The bank angle remains the same for all, roll left 53, roll right 67.

Conrad — Okay.

RKV Cap Com — Area 11 7-2. 06 17 03, 17 plus 07, 22 plus 11. Area 11 8-2. 07 52 49, 15 plus 42, 20 plus 47. 11 9-1, 09 15 18, 17 plus 12, 22 plus 16. 12 0-1. 11 plus 04 18, 12 plus 52, 18 plus 16. 12 1-1. 12 27 39, 14 plus 08,

19 plus 20.

Conrad Roger. Got all of those.

RKV Cap Com Roger. Houston Flight, RKV Cap Com.

Houston Flight Go ahead, RKV.

RKV Cap Com Everything looks real good here on the ground . . . . We're transmitting real time. TM off this time. Gemini 5, RKV Cap Com. We'll be standing by for the rest of the pass.

Conrad Okay. Mighty fine. Thank you

That was taped voice conversation between spacecraft Gemini 5 and the Rose Knot Victor tracking ship off the west coast of Peru. This is Gemini Control at 181 hours and 35 minutes into the flight.

END OF TAPE

This is Gemini Control at 182 hours and 2 minutes into the flight of spacecraft Gemini V, which at the present time is on the 115th revolution and is passing over approximately Vietnam, and moving out over the Pacific area. According to the reports we have from our ground stations over the past hour, all spacecraft systems are functioning normally and the spacecraft crew is in good health, and command pilot Gordon Cooper is awake at this time while pilot Pete Conrad is in a sleep period. According to our flight plan, very shortly command pilot Gordon Cooper will have a MSC-1 test, which is a measurement of radiation outside the spacecraft. This is Gemini Control at 182 hours and 3 minutes into the flight.

END OF TAPE

This is Gemini Control at 182 hours and 32 minutes into the flight of spacecraft Gemini 5. At the present time spacecraft Gemini 5 is on its 115th revolution over the earth, and is passing over the south Pacific on its way to the Rose Knot Victor, our tracking ship located off the west coast of Peru. Here in the Mission Control Center the white team of flight controllers is concluding its last night of direction of spacecraft Gemini 5, and the blue team is about to take over. Our press briefing will begin at the NASA news center at 11:30 p.m. This is Gemini Control at 182 hours and 32 minutes into the mission.

END OF TAPE

This is Gemini Control 183 hours and 2 minutes after lift-off. Gemini V has just begun the 116th revolution and will be acquired by the Canary Island tracking station in 2 minutes. It just made a pass over the tracking ship Rose Knot, which will be the last pass over this ship for this mission. The blue team of flight controllers has just settled down for their last tour of duty for this mission here in Mission Control. This is Gemini Control.

END OF TAPE

This is Gemini Control 184 hours and 26 minutes after lift-off. Gemini V has just begun its 118th revolution and will be acquired by the Antigua station of the Eastern Test Range within the next minute. A communications check between the Sea Lab with astronaut Scott Carpernter aboard, off the shore of California, in approximately 200 feet of water, will be run, remoted from Houston, through the Antigua station. As Antigua acquires the spacecraft and communications are established, we will join the conversation. Still no conversation yet on air-to-ground. We expect it is imminent that there will be some discussion between the spacecraft communicator here -- we'll go live now.

Houston Cap Com	Gemini V, Gemini V, Houston Cap Com. Over.
Cooper	Go ahead Houston Cap Com, Gemini V.
Houston Cap Com	Roger. You're looking good here on the ground. We have a number of things to pass up to you now, and if you can copy them down we will try and be quiet the rest of the way. First, we would like you to place your reentry C-band to continuous.
Cooper	Roger. C-band continuous.
Houston Cap Com	Roger. I have some update on your PLA's if you are ready to copy.
Cooper	Roger. Just a moment.
Houston Cap Com	OK.
Cooper	OK, we're ready.

Houston Cap Com — Roger. Area 122-1, 14 02 24, REP 400K is 12 + 58, 18 + 17, roll left 53, roll right 67. Area 123-4, 16 47 58, 15 + 50, 20 + 55, roll left 53, roll right 67. Copy?

Cooper — Roger. Got those.

Houston Cap Com — OK, now some general instructions. When you get to Carnarvon set your event timer to 27, I say 27, instead of 36. Copy?

Cooper — 27 instead of 36, Roger.

Houston Cap Com — Roger, and the weather in the recovery area is improving. The forecast at present for your landing is 2000 scattered, ten miles, 10 miles, the winds 230 degrees at 10 knots, the sea about 2 to 3 foot waves, the temperature is 82, and you have about five tenths coverage.

Cooper — OK, got it.

Houston Cap Com — OK, on your medical data passes we would like to delete the Canary medical data passes on revs 119 and 120 and add the following if you are ready to copy.

Cooper — OK, ready.

Houston Cap Com — Rog. Medical data on the pilot at the Canaries, acquisition time 08 13 26. Medical data on the

command pilot at Carnarvon, acquisition time 08 48 10.

Cooper — Say again that Carnarvon time.

Houston Cap Com — Carnarvon is 08 48 10.

Cooper — Go ahead.

Houston Cap Com — OK, in general, your acquisition times according to your flight plan are 38 minutes later, in other words, the flight acquisition is 38 minutes later than you have on your flight plan for the rest of the mission.

Cooper — OK.

Houston Cap Com — OK, Elliot's got some procedures on your retro checklist now.

See — The first thing I want to discuss with you is proposed fuel cell test. What they'd like to do is have you take all your load on section 2, and the purpose is to see if a section which has been down for a pretty fair amount of time can carry the full load before retrofire. This is proposed to be done only for about an hour and then we'll turn it back on. How does this sound to you guys? (Pause) Let me go ahead and give you the procedures for it and than you can continue to think about it because you got a while before it should be done. Are you reading me, Gemini V?

Cooper — Roger, we're reading you.

See OK, the procedures would be as follows: Time day 8 08 13, purge both fuel cells. Would you put your reentry C-band on, please? (Pause) Would you put your reentry C-band on continuous, please, Gemini V?

Cooper Done.

See OK, next item is 8 08 57, section 1 power switch off. We do not want you to shut down the primary coolant loop, repeat, do not shut down the primary coolant loop. At time of day 8 09 57, section 1 power switch on. During this period you should be carrying about 32 amps which we think will bring you down to about a 23 volt main buss voltage. How does this sound to you? You can be thinking about it and as far as I'm concerned if you have any strong objections, it's up to you whether you do it or not. We would like very much to do it if it's OK with you guys. Now Sea Lab 2 is standing by and is ready to talk to you at this time.

Cooper OK.

See You can go ahead and call them.

Cooper Hello Sea Lab, Gemini V, Cooper.

Sea Lab 2 Sea Lab 2 transmitting from 200 feet down off LaJolla. How do you read, Gordo?

Cooper Fine, how you doing, Scott?

Sea Lab 2 — Roger, Gordo. You're doing a great job. We almost missed you. We just got down this afternoon and I'm glad we got a chance to tell you what a great job you two guys are doing. I hope you have a very plesant reentry shortly. Over.

Cooper — . . . . .

Sea Lab 2 — Thank you. My best . . . . before too long. Over.

Cooper — Good to hear from you down there. How're things going?

Sea Lab 2 — Roger, Gordo, things are going very well. We just got . . . Sea Lab about 6 hours ago -- 8 hours ago. It took a while to get set up and get going. We have a lot of sea life to study. The Sea Lab is in good condition and we're looking forward to pleasant days . . . . down here.

Cooper — Please say that over again.

See — You have about 20 seconds to LOS, Gordo.

Houston Cap Com — Gemini V, Houston here, would you check to make sure your reentry C-band is on and your adapter C-band is off please

Cooper — You want adapter C-band off?

See — On command. Adapter on command, and reentry on continue.

Cooper	Houston, Gemini V here.
See	Go ahead.
Cooper	Houston, Gemini V.
See	Go ahead, Gemini V.

This is Gemini Control. You could faintly hear the voice of astronaut Scott Carpenter in Sea Lab. The falsetto garbled effect of his voice was due to the mixed breathing gas of oxygen and helium at several atmospheres which effects the effectiveness of his vocal chords. This is Gemini Control 184 hours 36 minutes after lift-off.

END OF TAPE

This is Gemini Control 185 hours and 2 minutes after lift-off. Gemini 5 presently is about one-third of the way through the 117th revolution, will be acquired by the Carnarvon, Australia tracking station in approximately 13 minutes for a pass that should last around 7 minutes and 30 seconds. There will be about another 4 passes over Carnarvon before the end of the mission. The retrofire clock at the right hand side of the control room says 5 hours and 25 minutes until retrofire. During the pass over the Canary Island station earlier in this revolution all the telemetry read-outs on the ground looked very good according to the spacecraft communicator at Canarys. They also ran a C-band track of the spacecraft from Canarys using the reentry antenna on the adapter. This is Gemini Control.

END OF TAPE

This is Gemini Control 185 hours 32 minutes after lift-off. Gemini 5 is now one-half way through the 117th revolution just past Australia, north of New Zealand. The stations to acquire will be the stations of the Eastern Test Range at 58 minutes past the hour. During the pass over the Carnarvon, Australia tracking station earlier in this revolution a radar track on the reentry was run again as it had been run in the Canary Island pass earlier. At this time we are 185 hours 32 minutes after lift-off. We now have for you the voice transmission tape between the spacecraft Gemini 5 and the Carnarvon tracking station.

Carnarvon Cap Com	Gemini 5, Carnarvon Cap Com.
Conrad	This is Gemini 5, go ahead Carnarvon.
Carnarvon Cap Com	Roger. I have a flight plan update when you are prepared to copy.
Conrad	Ready to copy.
Carnarvon Cap Com	Power up 09 21 34. Remarks: 132.8 degrees west, rev 118. Next item - star, same time, 09 21 34. Remarks: Right Ascension 22 hours 59 minutes. Do you copy?
Conrad	Roger. Copy.
Carnarvon Cap Com	That's it. You're looking good down here.
Conrad	We're go up here.

END OF TAPE

This is Gemini Control 186 hours and 2 minutes after lift-off, and 4 hours and 25 minutes til retrofire. Gemini 5 has just begun the 118th revolution, was acquired 4 minutes ago by the stations of the Eastern Test Range. Spacecraft communicator Dave Scott here in Mission Control is presently talking to the crew of Gemini 5. He said they looked good on the ground, and he also recommended that they begin stowage procedures prior to the retrofire sequence and subsequent landing. This is Gemini Control.

END OF TAPE

This is Gemini Control 186 hours and 32 minutes after lift-off. Gemini 5 is about 1/4 of the way through the 118th revolution. It is now crossing the east coast of Africa about the outlet of the Red Sea, will be acquired by the Carnarvon, Australia station in 26 minutes. During the pass over the Eastern Test Range stations early in this revolution and the end of the previous one the flight plan updates were passed up by the spacecraft communicator here in Mission Control. These updates were the preretro checklist, also outlined the test of the OAMS system to determine the amount remaining if any, and also the procedures for aligning the platform using the reaction - the RCS system - reentry control system in the small end of the spacecraft. During the Canary Islands pass subsequent to that a medical data check was run on the pilot. At this time we are 186 hours and 33 minutes after lift-off. We now have the tape of the voice transmissions during the State-side pass early in this revolution. We'll listen to this tape now.

Conrad — Houston Cap Com, Gemini 5.

Houston Cap Com — Gemini 5, Houston Cap Com. Everything looks good on the ground, you've got about 4 hours and 27 minutes til retro. We recommend beginning stowage and are standing by. Go ahead.

Conrad — Roger. We have a question for you.

Houston Cap Com — Go ahead.

Conrad — Has anybody thought of what could the effect be of the RCS plume on the scanners?

Houston Cap Com — Stand by.

See — Are you wondering about using them for platform alignment, Pete?

Conrad — Affirmative.

See — We'll check that one out for you.

Houston Cap Com — Gemini, Houston. We've got an update on your flight plan if you want to copy it now, or we can pass it to you at Carnarvon. We're checking the thrusters and the scanners out for you.

Conrad — We're ready to copy.

Houston Cap Com — Okay. Coming up.

See — Okay, Pete. On day 8 10 hours 27 minutes power up checklist with one change - rate gyros on before computer on. Start preretro checklist. Copy?

Conrad — Okay. 08 10 27 power up checklist, rate gyros on before computer.

See — Right. Okay, did you get that time? That was 10 27 and 00 on the seconds.

Conrad — Roger.

See — Okay. At 11 hours 00 minutes 00 seconds OAMS power switch off. Activate and check RCS operations. Then align platform using RCS. Do you copy?

Conrad — 08 11 00 power switch off, operate and activate RCS, and align platform with RCS.

See — Right. That was 11 hours - it's day 8, 11 hours. Okay, at day 8, 11 hours, 26 minutes, 00 seconds, which is approximately TR minus one hour, RCS power switches off, evaluate OAMS in direct. That's to check it out as thoroughly as you can, tell whatever you can at this

point about its operation - whether - just blasting it out indirect will clear it out, or whether we're essentially out of fuel. When completed fire the OAMS regulator squib, complete preretro checklist. And RCS power switches will have to come back on, of course, because you'll be pretty close to being out of OAMS.

Conrad — Okay. We got it, go ahead.

See — Okay. And at day 8, 12 hours. Stand by a minute. Pete, on the last Carnarvon pass before retrofire, which will be a time of 11 hours, 57 minutes, report preretro checklist complete and continue nominal flight plan. Do you copy?

Conrad — That's fine.

See — That's all we have. We're standing by.

Conrad — Okay. Well, give us a reading on the scanners. As I see it we have a night retrofire. Is that correct?

See — That's affirmative.

Conrad — And we will not have a countdown from Hawaii. Is that correct?

See — We plan that you will have a countdown from Hawaii.

Conrad — We have that much acquise time with them on orbit 121 huh? I mean 120 huh?

See — That's correct.

Houston Cap Com — Roger. Acquisition at Hawaii at rev 120 is 12 23 22.

Conrad — And when do we lose them?

Houston Cap Com — Okay. LOS is 12 30 47.

Conrad	Okay, we'll make out pretty well on that.
Houston Cap Com	Roger. They ought to be able to get your IVI's and attitude and everything.
Conrad	Okay. Very good. And if you can answer the questions on what the RCS will do to the scanners we're very happy.
See	Okay.
Houston Cap Com	We'll check it and give it to you at Carnarvon.
See	We'll get some info in that to you as quickly as we can.
Conrad	Okey-dokey. Incidentally, as a matter of information, the OAMS propellant gauge has gone on down to below 0.
See	The OAMS quantity gauge?
Conrad	Yeah. The prop quantity gauge.
See	Roger. It's no problem if in this exercising you just run it on out of fuel.
Conrad	Fine.

END OF TAPE

This is Gemini Control 187 hours and 2 minutes after lift-off. Gemini V is just crossing the east coast of Australia and is northwest of the Island of New Zealand, midway through the 118th revolution. During the Carnarvon pass just completed, medical data pass check was run on the command pilot. He also gave food and water and sleep reports to the Carnarvon surgeon. Guaymas station will acquire the spacecraft in 25 minutes. For those of you in the Houston and southeast Texas area who operate eyeball tracking stations, the spacecraft should be visible starting at 5:02 central standard time in a westerly direction. It will rise at 5:02, will pass to the north, be due north at 5:08 at an elevation of approximately 67 degrees. It will set to the east at 5:09 central time. At this time we are 187 hours and 3 minutes after lift-off. We have now a tape of the voice transmission between the Carnarvon station and Gemini V.

Carnarvon Cap Com	Gemini V, Carnarvon, we have a good oral temp. Stand by for surgeon.
Carnarvon Surgeon	Gemini V, Carnarvon Surgeon, standing by for your first blood pressure.
Cooper	Roger.
Carnarvon Surgeon	Your cuff is full scale.
Carnarvon Cap Com	Would you place your quantity read switch to fuel cell H_2 and leave it there for remainder of mission.

Carnarvon Cap Com	That'll be TX.
Carnarvon Surgeon	We have your blood pressure. Standing by for exercise on your Mark.
Cooper	2, 1, MARK.
Carnarvon Cap Com	Flight, Carnarvon. . . . .
Houston Flight	Go ahead, Carnarvon.
Carnarvon Cap Com	OK, do you want to change the time on that that was updated to the crew on that TR minus one hour or do you want to leave it now that's it's full scale? You updated them 11 26 and the flight plan said 11 27 39.
Houston Flight	Negative. It's approximately one hour we're interested in.
Carnarvon Cap Com	Roger
Carnarvon Surgeon	We have your blood pressure. Standing by for food, water and a 24-hour sleep report.
Cooper	Roger, I've had 37 pounds 4 ounces of water, 08 000000 I had meal 5 Charlie. I had 2 hours of sleep just recently, very sound.
Carnarvon Suregeon	Very good. How are you feeling in general at this time.
Cooper	Fine
Carnarvon Surgeon	Thank you Gordo. If you're doing as good as you look on the ground, you're in good shape. Carnarvon Surgeon out.

Carnarvon Cap Com	Gemini V, Carnarvon Cap Com, did Flight advise you that for your OAMS thruster check at 11 hours 26 minutes, to use attitude thrusters only. Do not use maneuver thrusters.
Cooper	Roger.
Houston Flight	Carnarvon Cap Com, this is Houston Flight.
Carnarvon Cap Com	Go ahead.
Houston Flight	In answer to that question they asked on the effect of the RCS plume on the scanners.
Carnarvon Cap Com	Roger
Houston Flight	As far as we can determine there will be no problem. They ran some similar checks on GT-3 and it's OK.
Carnarvon Cap Com	Roger
Carnarvon Cap Com	Gemini V, Carnarvon. Flight advises on this RCS plume effect on scanner, there should be no effect. He said that they ran test on GT-3 and found no problem.
Cooper	OK, very fine. Thank you.

END OF TAPE

This is Gemini Control 187 hours and 32 minutes after lift-off; 2 hours 55 minutes until retrofire. Gemini 5 is now completing the 118th revolution. During the pass over the Guaymas, Mexico station telemetry looked real good according to spacecraft communicator Ed Fendell at the Guaymas station. During the present State-side pass there was a check of the fuel cell section number 1, checked the voltage with it turned off, and it read 22.9 volts. A purge of the fuel cell sections will be conducted during the upcoming Canary Islands pass. This is Gemini Control.

END OF TAPE

Good morning. Gemini Control, Houston 187 hours 57 minutes into the flight. The last pass across the States Dr. Berry among others chatted with Gordon Cooper, and Cooper declined the use of any stimulates for the reentry upcoming in about another rev or two. He said he was feeling fine, and he sounded quite cheery. Dr. Berry conveyed congratulations to Gordon Cooper on his wedding anniversary today. We believe it's his 18th. Congratulations came from his wife. We have the conversation. We'll play it for you now.

Houston Surgeon — Gemini 5, this is surgeon. Good morning, Gordo.

Cooper — How are you?

Houston Surgeon — Listen, I'd like to check with you - according to the records here you both have had some sleep during the night. How do you feel about any aid here as far as coming in for fatigue?

Cooper — Making a house call?

Houston Surgeon — Yeah. Could I do that? Say, incidentally, Trudy asked me to tell you "Happy Anniversary" this morning.

Cooper — Return my wishes to her.

Houston Surgeon — Will do.

END OF TAPE

Gemini Control here 188 hours 32 minutes into the flight. We just passed the Carnarvon station at which point we actuated the RCS rings and they appeared to be working all right. We've also turned the rate gyros on; the computer has been powered up, it's in the prelaunch mode; and everything appears to be quite green at this point. This is Gemino Control

END OF TAPE

This is Gemini Control, Houston, 188 hours 48 minutes into the flight. We have racked up now the Carnarvon pass and will play it for you at this time.

Carnarvon Cap Com	You look good on telemetry and we're standing by.
Cooper	Roger Carnarvon . . .
Carnarvon Cap Com	Computer just came on.
Houston Flight	Roger.
Carnarvon Cap Com	You need a little yaw right. . .

Gemini Control here. Our orbit this morning is like this, 123.8 perigee, apogee 180.3, statute miles of course. The period of our revolution is 95.2 minutes. Just been chatting with the weather man, Ernie Ammon, a veteran of Mercury as well as Gemini launches. He works both the Cape and Houston. Ernie's report is thus: down in 121-1 he reports scattered clouds, southerly winds of about 10 knots, seas running 2 to 3 feet, visibility 10 miles. We asked Ernie if he was happy with that and he came back with the statement, "Real happy. They picked a good spot." We also note with some interest here around the Control Center, a number of people have read it, the horoscope in one of the local morning newspapers, which goes like this: "Being active during the morning brings fine results, but later you have to take it very easy. Maintain your poise. Say what you plan to do then carry it out -- then carry on with the work with a nice easy gait." Pretty good advice for the people involved in the Gemini effort this morning. This is Gemino Control.

END OF TAPE

Gemini Control here 189 hours 10 minutes into the flight. And the Guaymas station raised the spacecraft just a few minutes ago. The opening message was certainly a cheerful exchange. The ground gave the spacecraft a go, and the report came back from Gordon Cooper "We're go up here. Everything is just peachy keen." Pete Conrad complimented the Guaymas station on their handling of this mission, all they've done for them, and he advised that he'd see them on the ground. The spacecraft is operating on their reentry control system maneuvering unit right now. It's been on that for about an hour. And over the Guaymas station Conrad made one last attempt to see if there was any fuel left in the main onboard maneuvering system tanks - the system we've been using for the last 8 days, and he got 0 thrust out of his attempt. The ground showed no fuel or and no thrust. This is Gemini Control.

END OF TAPE

This is Gemini Control, Houston, 189 hours and 12 minutes into the flight. And we have the beginning of this Stateside pass, we're going to break it up into increments but we'll play it right through for you. One element - one note before we start that - in the event that we don't accomplish a 121-1 landing - that is, if we should at the last moment, wave off a retrofire, the Flight Director has decided the next area he would go for, is 123-4, that's 123-4 out in the west Pacific. But I want to emphasize that everything looks just 4.0 at this point for a 121-1 landing. Everything seems to be functioning on board, the crew sounds chipper, and they've got their stowage list apparently all put to bed and they're going through their preretrofire checklist. Let 's listen to the Stateside conversation now.

Guaymas Cap Com	Gemini 5, Guaymas Cap Com.
Cooper	Ok, Guaymas. Gemini 5.
Guaymas Cao Com	Ok. We show you go here on the ground. What do you do?
Cooper	Roger. We're go here. Everything's peachy keen.
Guaymas Cap Com	Ok.
Cooper	It's nice to have a control system again.
Guaymas Cap Com	I imagine it is.
Conrad	Hey, Guaymas.
Guaymas Cap Com	Say, boy.
Conrad	We sure appreciate everything you did for us. We'll see you on the ground.
Guaymas Cap Com	Ok, Peter.
Cooper	Say thank you to all the people there who have done a fine job.
Guaymas Cap Com	I sure will. I think you all have done a real great job.

Conrad — Thank you. We couldn't have done it without you all.

Guaymas Cap Com — What is your status with that OAMS at this time? What are you doing with it?

Cooper — We're not really . . . the OAMS . .

Guaymas Cap Com — Ok. Will you run that OAMS check?

Conrad — We didn't have enough OAMS system left to run it. We tried a little . . . and if you'll stand by I'll go ahead and run this test to see if we can hear anything left there. we're in RCS

Guaymas Cap Com — Ok.

Conrad — No, I put in a squib but I couldn't hear anything.

Guaymas Cap Com — Ok. Very good. Flight, Guaymas, Copy that?

Houston Flight — Affirmative.

Guaymas Cap Com — I'm not showing any OAMS lights at all on my console.

Cooper — Chris, out whole OAMS system was just pretty well shot.

Guaymas Cap Com — Roger.

Cooper — We're all set. We have the platform all aligned. And . .. once more and follow laong.

Guaymas Cap Com — There we go.

Cooper — We've even got everything stowed.

Guaymas — Now you're talking of a real accomplishment.

Cooper — It is

Guaymas Cap Com — RCS seems to be holding real well.

Cooper — Yeah, it's a real fine system.

Guaymas Cap Com — Ok.

Conrad — We're using radiation waves all the way around.

Guaymas Cap Com — I beg your pardon.

Conrad — I say we're using radiation waves all the way around for the alignment.

Guaymas Cap Com — Roger.

Cooper — We'll also start our . . . . for retrofire and then we'll . . . . for reentry until we need to bring . . . .

Guaymas Cap Com — Roger, got that.

Houston Cap Com — Gemini 5, Houston.

Cooper — This is Gemini 5, all set . . . retro.

Houston Cap Com — Very good. We're going to be sending your computer load. We want to confirm that you've got the computer on and it's in prelaunch.

Cooper — Roger. I'm prelaunch computer.

Houstn Cap Com — Ok. Very good. I've also got your backup information. Are you ready to copy?

Cooper — Ready.

Houston Cap Com — Ok. GMT of retrofire is 12 27 38. Time for 400,000 is 14 plus 18. Time to reverse bank, 19 plus 25. Roll left 53, roll right 67.

Cooper — Roger. . . .

Houston Cap Com — Gemini 5, Houston. Say again, please.

Cooper — Roger. You want us to put our computer . . .

Houston Cap Com — Roger. Are you all set now?

Cooper — Right.

Houston Cap Com — Roger. GMT of retrofire is 12 27 38. Time to reverse bank - time to 400,000 feet, 14 plus 18. Time to reverse, 19 plus 25. Bank left, 53. Bank right, 67.

Conrad — Copied.

Houston Cap Com — Roger. Your altimeter setting for the recovery area is 30.10. Gemini 5, Houston again.

Cooper — Go ahead.

Houston Cap Com — Be advised that by some calculation here, your water tank for your fuel cells is approaching the full point, and if you get a Delta P light, we advise you not to worry about it because we've run some tests that indicate that there's plenty of time - on the order of 20 plus hours after you've run the tank full that the fuel cell will still operate properly.

Cooper — Roger. We won't worry.

Houston Cap Com — Ok.

Cooper — These old fuel cells have done very well, haven't they?

Houston Cap Com — They sure have. We've run all kinds of tests on them, haven't we?

Cooper — Yes, we have.

Conrad — Houston our yaw system. It was just so sick that there was just no sense working with it. When the rates were down what was coupling into what rate, we just couldn't figure out which thrusters were bad.

Houston Cap Com — Roger.

Conrad — We put in a squib and we couldn't hear it, then I did pulse regulator and it worked.

Houston Cap Com — Ok, very good. Do you have a good DCS load for 121-1, and a good TR time?

Conrad — Roger. We'll put the computer to reentry at this time.

Houston Cap Com — Roger.

Houston Surgeon — Gemini 5, this is Surgeon. I want to check again for sure that we're in agreement that we will not use Item B. Is that affirm?

Cooper — It's not affirm. We took one for the road.

Houston Surgeon — One for the road. Ok. Gordo, I want to confirm again this blood pressure for Pete's use on reentry - we checked the times here and we see that the only time that we'll be over a site where we can get any blood pressure prior to the time that you're on the water would be over Guaymas, Pete, this would be between 12:35 and 12:40 over Guaymas. That would be after retro over Guaymas. So if you can get one blood pressure at that time then get the programer in as soon as you're on the water and be prepared to switch it back and forth then. The other item is in postlanding, remember that if you do have any symptoms at all

END OF TAPE

Houston Surgeon — have any symptoms at all after bridling the chute or on the water to be sure and prop those calves and get your feet elevated, slide down so that your feet are above your head.

Cooper — I've got the blood pressure bulb inside, and I have the pumping gear in my pocket, and all I have to do is put it on and pump up a blood pressure, right, and it goes on recorded?

Houston Surgeon — Roger. Correct.

Houston Cap Com — Gemini 5, Houston. Be advised everybody ran out, looked up, and there you were.

Cooper — How did it look?

Houston Cap Com — They want me to - well, it looked like you were about 3 degrees off in yaw.

Cooper — No, that's wrong.

Houston Cap Com — Okay.

Cooper — Garbled.

Houston Cap Com — Must have been the sun angle.

Cooper — That's what it was.

Houston Cap Com — Did Dave Scott mention to you the fact that you're going to have a lighted horizon at 400,000 feet on your reentry?

Cooper — Going to have what?

Houston Cap Com — Just about as you get to 400,000 feet you should have a lighted horizon.

Cooper — Roger.

Houston Cap Com — Gemini 5, Houston again.

Cooper — Go ahead.

Houston Cap Com — The ships that will be in your landing area will be the Lake Champlain and 2 destroyers, the DuPont and the Waldron. The airborne - the man in charge of the airborne operations call sign will be air boss, and the helicopters will be called Recovery I and II, and Search I, II, and III.

Cooper — Okay.

Houston Cap Com — Then as you're coming on down I'll give you the call sign of the closest one to you and who you should try to contact.

Cooper — Roger. What's the call sign of Lake Champlain?

Houston Cap Com — The call sign is "Nighthawk" but I think it'll be referred to as the Lake Champlain.

Cooper — Okay, we just wanted to call them to get a Charlie time and a Fox coordinate.

Houston Cap Com — Roger. Do you still remember those panel signals for coming onboard.

Conrad — You [illegible].

Cooper — .....

Houston Cap Com — Say again.

Cooper — .....

Houston Cap Com — I don't know how you log time like that.

Cooper — .....

Houston Cap Com — Gemini V, Houston here. Be advised that since you have

	changed microphones, you are pretty difficult to read. It would be better if you talked a little bit slower.
Cooper	Roger. We used the headsets for the entire flight till about 15 minutes ago.
Houston Cap Com	Okay, very good. They are a lot better. You seem to be picking up a lot of background noise when you are transmitting.
Cooper	Okay
Houston Cap Com	What kind of head sets were those, Gordo.
Cooper	Those lightweight .....
Houston Cap Com	I think I've heard of that before.
Cooper	Good.
Conrad	Houston, Gemini V. We'd like to report that the retro checklist is complete.
Houston Cap Com	Roger, I understand. Preretro is complete.
Conrad	Houston, could you give us a GMT time hack.
Houston Cap Com	Roger. GMT time hack. On my mark it will be 11 16 00, and that will be about 50 seconds.
Houston Cap Com	I'd like to remind you again, Gemini V, that your event timer should be set up at 27 minutes over Carnarvon, rather than the 36 it was in the flight plan.
Conrad	I'm sorry.
Houston Cap Com	Okay, in 15 seconds approximately it will be 11 16 00. 5 seconds, 3, 2, 1 MARK.

END OF TAPE

See 3, 2, 1, MARK, 11 16 00

Cooper . . . . . .

See Gemini V, let me caution you on your microphone again. We're going to need the IVI readings over Hawaii, and we're not going to have a lot of time, so try to give them slowly and distinctly.

Cooper OK, is that better now?

See Yes, it is. Did you put the face plate down?

Cooper No, I moved the microphone farther away.

See OK.

Cooper How do I sound now, the faceplate's down? Is it any better?

See That's a little better.

Cooper OK.

See It looks like we will have adequate coverage across the states so that we should be able to provide you your backup guidance quantities before you go into blackout.

Cooper Very good. Houston, Gemini 5.

Houston Cap Com Go ahead.

Cooper When would you like the number 1 bio-med recorder put on, what time? We don't have it on the check list.

Houston Cap Com Right now would be a good time, right now. Did you get that, Gemini 5?

Cooper I say what time would you like to bio-med number one

recorder on? It's not on the check list.

Houston Cap Com Roger. Put it on now, put it on now.

Cooper Roger.

Houston Cap Com We're just coming up on LOS now.

END OF TAPE

This is Gemini Control, Houston, 189 hours and 32 minutes into the flight. We have just had a pass south of the Canaries station and had a brief update there. Had the usual exchange of congratulations. We will probably hear more of that in the last circuit around the earth. Congratulation to the crew going up from the ground and from the crew back to the ground stations. Let's listen to the Canary conversation now.

Conrad — Hello, Canary Cap Com, Gemini 5.

Canary Cap Com — Roger. We would like to confirm that biomed recorder number one is on.

Conrad — Roger, it's on.

Canary Cap Com — Ok, and what computer mode are you in?

Conrad — Reentry.

Houston Flight — We want it on.

Canary Cap Com — I thought that's what I said. He said it is on. And it is on.

Houston Flight — No, he said it was off. Check him again.

Canary Cap Com — We're showing it on here. Flight would like to get another reading on the biomed recorder no. 1 status.

Conrad — I said it's on. Number 1 is on - they're both on.

Canary Cap Com — Roger, I copy No. 1, 2 both on.

Canary Cap Com — Gemini 5, we'll give you a time hack for TR at one hour - that will be 60 minutes.

Houston Flight — What do you show his computer in now?

Canary Cap Com — I'm still showing touchdown predict. Want to get a checklist backgrounder on that. We're showing no time here on the ground.

Houston Flight — Roger.

END OF TAPE

Canary Cap Com — Gemini 5, Canary Cap Com. I'll give you a time hack on TR in roughly one minute.

Conrad — Gemini 5, roger.

Houston Flight — I'll give you a time hack in 15 seconds. On my Mark it will be 11 27 00. MARK.

Canary Cap Com — Roger, Flight. I'm with you.

Houston Flight — Time to go is one hour and 25 seconds from my Mark. MARK.

Canary Cap Com — Roger.

Canary Cap Com — 10 seconds. 3, 2, 1, MARK. In 60 minutes.

Conrad — Roger, It's right on the button. 600 00.

Canary Cap Com — Roger. We'll have LOS in about 30 seconds. Everybody here at Canary Island would like to send their congratulations

Conrad — Thank you very much. We'd like to say the same to you for your wonderful help.

Canary Cap Com — Roger, our pleasure.

Conrad — See you in Houston.

Canary Cap Com — Roger. The Canaries have had LOS.

END OF TAPE

Gemini Control, Houston here; 189 hours, 42 minutes into the flight, and we're coming up on Tananarive off the coast of Africa. I would like to run through the sequence of events at the retro fire--during the retro maneuver itself the spacecraft will be pitch-down, nose down, 30 degrees. That is blunt end forward, pitch down 30 degrees, 0 roll, and 0 yaw. That attitude will be held through retro fire, and immediately after retro fire, the crew will roll the spacecraft around 180 degrees and assume a re-entry angle of 1.7 degrees, that'll be 1.7 degrees up off the horizontal, in orther words, slightly nose up. At that point the crew will be heads down if we're still altogether. The retro fire will take place 700 miles northeast of Hawaii. Then about 14 minutes after retro fire, the spacecraft should be at 400,000 feet, somewhere between Texas and Florida, and at that point they will still be heads down, and they will roll to their left about 53 degrees; according to the present estimate this could change slightly based on radar data during this pass. The present plan is 53 degrees. Ten minutes later they should be entering their black out period, that'll be 16 minutes after retro fire, and at that time they will be at about 300,000 feet. A minute or two after they are in the black out, the computer onboard will give them their first solution on their landing area, and will have evaluated all the information to date there, the exact thrust they got from the retro rockets, the other values; and it will give them a solution. They will end the blackout period at an altitude of 137,000 feet. That should occur about 20 minutes and 35 seconds after retro fire. And by that time they will have reversed their roll. They will have rolled over to the right to about 67 degrees off a zero point of heads down. Then they will look at their eight ball, in the

center of the console, a series of two cross hairs, one horizontal, one vertical; and they will attempt to drive these cross hairs to the zero point, and this will have the effect of taking out both cross range and down range errors. Then if everything goes right, at 50,000 feet, the 50,000 foot point would occur 22 minutes and 19 seconds after retro. They should have main chute about 24 minutes after retro fire, and they should be on the water at a point 275 miles southwest of Bermuda at 28½ minutes after retro fire. This is Gemini Control.

END OF TAPE

This is Gemini Control here, 190 hours 2 minutes into the mission. We are in a Carnarvon pass right now. The crew has run through their final check points with the Carnarvon station. They started an event timer on-board. The flight plan calls for them to start a minus 256 second check-list between Canton Island and Hawaii. A very few minutes, a minute or so after the are acquired at Hawaii, they will go into their T-1 minute checklist with retrofire occurring at 6:27:43 central standard time. We have the Carnarvon conversation. We are still in communication out there and we will play it for you now.

Carnarvon Cap Com — Gemini V, Carnarvon Cap Com.

Conrad — Go ahead Carnarvon, Gemini V.

Carnarvon Cap Com — Roger, I'm going to update you with a new preretro load and a new TR time. I've also got the backup guidance quantities. Are you prepared to copy?

Conrad — Ready to copy.

Carnarvon Cap Com — Transmitting your TR. You got a TR, you are in sinc, transmitting your load.

Conrad — Wai minute. Don't transmit it yet.

Carnarvon Cap Com — I'll transmit the load.

Conrad — Did it go in.

Carnarvon Cap Com — Roger, got a .....

Carnarvon Cap Com — Let me give you your backup guidance quantities to you and check a couple of the cores in the MDIU.

Conrad — Read it.

Carnarvon Cap Com — Roger. GMTRC 12 27 43. REP 400K. 14 + 12, RETRB 19 + 21. Bank left 53, bank right 67. Copy?

Conrad	Roger.
Carnarvon Cap Com	Okay, let's check cords, 03, GR cord 03.
Conrad	52192.
Carnarvon Cap Com	Roger, stand by one. Flight, there is some difficulties isn't there? He copied at 992, I got 93 at the end.
Houston Flight	That's okay.
Carnarvon Cap Com	Okay, read out cord 10.
Conrad	00955.
Carnarvon Cap Com	Roger, you got it. Looks good.
Conrad	Oh.
Carnarvon Cap Com	I'll give you an event timer countdown time hack at 27 minutes 00 seconds.
Houston Flight	Carnarvon, have him stand by.
Carnarvon Cap Com	You got 20 seconds. Go ahead Flight.
Houston Flight	That's all right, stand by. We want to have him go out on one mode and back into reentry just to check it. Stand by.
Carnarvon Cap Com	10 seconds, 4, 3, 2, 1 MARK. 27. Got it?

END OF TAPE

Canarvon Cap Com	Got it. Okay, I'll give you a GMT time hack at 12 hours 00 minutes at 12 hours 01 minutes, and about 5 seconds.
Cooper	Roger.
Canarvon Cap Com	2, 1, MARK.
Conrad	Okay, we're right on 2. Verify the computer is in reentry.
Canarvon Cap Com	Roger. Flight, what were you talking about check?
Houston Flight	That's okay. That's what we want him to do, was verify ...
Conrad	I don't quite understand why we didn't get a DCS light on either the TR or the load that just went in.
Houston Flight	Roger.
Canarvon Cap Com	Roger, I got knots back in those core readouts you gave me check with my ET message.
Conrad	Give me a TR at 26.
Canarvon Cap Com	Roger, 10 seconds to go. 5, 4, 3, 2, 1 MARK. Got it?

END OF TAPE

This is Gemini Control at Houston. Forgive the loss there. We're at 190 hours, 22 minutes into the flight, and while we are talking, Jim McDivitt has been remoting to the spacecraft through Canton Island. Let's come up on that conversation, please.

Houston Cap Com — Gemini 5, Gemini 5, Houston here. We're standing by in case you need anything.

Cooper — This is Gemini 5.....

Houston Cap Com — Roger. Houston here. We're just standing by in case you need anything.

Cooper — Right here, everything's fine.

Houston Cap Com — Very good, very good.

Gemini Control back here. Retro fire clock shows 4 minutes and 10 seconds. Here in the Control Center, the Flight Director Chris Kraft, the flight surgeon, the capsule communicator, Jim McDivitt, and our retro fire officer, Tom Carter, have the same kind of sensors applied to their bodies that the crew does on Gemini 5, and we'll be taking another EKG reading during this retro fire maneuver. Hawaii has acquired. Pete Conrad's on the line. During that final minute, Pete will, Gordon Cooper will be holding his attitudes very carefully, then Pete Conrad at the same time will push a button marked SEP OAMS LINE. This will cut the line back to the OAMS system and the adapter, and then he will push the SEP ADAPTER button. At T-10 seconds he will arm the retro button by pushing it, and meanwhile Cooper will count down with our Hawaii communicator, Bill Garvin, down to the retro fire point. Our ground station in Hawaii says that the spacecraft is righ on its proper attitude. It's 30 degrees pitch down, 0 roll, 0 yaw.

END OF TAPE

And with a little more than 2 minutes to go, it's all quiet here in the Control Center and it is all quiet out in Hawaii, and at a point of about 150 to 40 miles of bubble lighting. Pete Conrad says, "We are Right on" he caught the 2 minute mark. Over in the Atlantic Ocean everything is ready, we've got 2 big 4 engine airplanes, 1 200 miles uprange, 1 200 miles downrange from the landing point, 3 search helicopters, 3 recovery helicopters, we have an on-scene Commander, a Navy plane, and S-2 out. We also have 3 C-130 airplanes which will relay telemetry. Here is the 1 minute mark. "Right there, SEP OAMS," Conrad said, "SEP ELECTRIC" and "SEP ADAPT". 9, 8, 7, 6, 5, 4, 3, 2, 1 MARK. Rocket 3 has fired, Rocket 2 has fired, Rocket 4 has fired, and Hawaii has verified all retros have fired, Conrad confirms. And Gordon Cooper has just read out his incremental velocity indicator needles, they showed 269 aft, 010 left, and 181 down. This sounds quite nominal. We're 1 minute beyond the retrofire point, and out in the spacecraft they should have just gotten our computer light on. Flight Director has asked for another set of summaries of the conditions at the time of retrofire. Through our rapid communications system, they will be in here and displayed within a second or two. The Hawaii Communicator is talking now. Let's listen to that conversation.

Conrad .... 26.

Hawaii Cap Com Roger.

Hawaii Cap Com I'll give you a mark at TR plus 3 minutes.

END OF TAPE

Gemini Control here. All the data is in from Hawaii and we look very good. A big sign has just gone up on our recovery map which says, "Nominal Retrofire." It's as much as we could have hoped for.

Hawaii Cap Com — Hawaii has had LOS.

Conrad — Say, we got it Hawaii.

Hawaii Cap Com — Roger, roger.

Houston Flight — Well done, Hawaii.

Flight Director Chris Kraft gives the Hawaii Station a well done on that maneuver. And within 3 to 4 minutes the California station should acquire. From the Carrier we learned that the helio's are airborne, the search and the recovery helios, a total of 6. Very little talk here in the Control Center. Everybody has their jobs to do and their numbers in front of them. And that will be a very active period in this pass across the States, several radar points taken.

Gemini Control here, we'll come back to you when California acquires.

END OF TAPE

This is Gemini Control here. Jim McDivitt has just raised the spacecraft through the California station and our environmental electrical communications officer says the main batteries look fine, their voltage is right up there where it ought to be. Jim has just urged the crew to enjoy the view as they take the plunge across the United States coming down the home stretch on their 120 revolution flight. They are probably getting a good look at this spacecraft down on the west coast. It's sweeping across New Mexico, darkness on the ground out there. Jim says the weather looks good at the recovery area. We're about 7 minutes now - 7 minutes into the - since retrofire. Cooper making a comment about looking for the pump package that was observed by Grissom and Young as it went by after the adapter separation. He apparently missed it though.The crew is now being instructed to pump up their blood pressure cuffs and we're going to take a blood pressure as we sweep across Texas here. The cuff is full-scale, Dr. Berry reports. We've got a valid blood pressure on the pilot. The blood pressure quantity was taken actually at the Guaymas station, Guaymas, Mexico. We've got about six minutes to go here before we reach the 400,000 foot mark and one minute later we'll be at 300,000 feet where the blackout period will begin and last about 4 minutes, a little over 4 minutes. Here's Jim McDivitt talking to the spacecraft - let's cut in on that.

Houston Cap Com	Ok. You should get the lighted horizon just slightly before 400,000.
Conrad	Roger.
Guaymas Cap Com	. . . are holding good, Flight.
Houston Flight	Roger.
Guaymas Cap Com	The secondary O_2 is real good.
Houston Flight	Roger.

Conrad — This is a very futuristic sight out here with - I don't know what all this stuff is - I guess it's pieces of the retro adapter, or whatever, following along, but it's all lit up with sunlight in a complete black void.

Houston Cap Com — Roger, can you see the retro adapter back there at all?

Conrad — No.

Houston Cap Com — Ok.

Conrad — Ok. We're beginning to see the horizon a few degrees below us.

Houston Cap Com — Ok.

END OF TAPE

.....ECOM reports the cabin temperature is 61 degrees.

Conrad Yeah, we have a good horizon now.

Houston Cap Com Roger on the good horizon.

Everything entirely nominal up to this point. We're listening right along with you, and everything just looks 40. Jim McDivitt giving Pete Conrad a little advice on how the horizon should look and exactly where to look. We're still estimating at 56 minutes, 56, we should have splash. We'll be coming very shortly into the blackout zone. The last communication was rather garbled, always an indication that we're going into blackout. They would be somewhere between, coming up on 400,000 feet in about 30 seconds. Jim McDivitt has just advised that blackout will occur at 16 minutes and 14 seconds after retro fire, which is very close the value we planned, about 2 revolutions ago, which was 16 minutes and 15 seconds. The pilots are now being instructed to roll left 53 degrees, and then their reverse angle will be 68 degrees. They start the 68 degree maneuver at 19 minutes and 25 seconds after retro fire, about 5 minutes from now. We're hearing from Pete Conrad. It's a little ragged, but it's coming in. Jim McDivitt's just advised the crew that their time for drogue chute will be 22 minutes and 5 seconds from retro fire. Their time for main chute is 23 minutes, 48 seconds. Jim McDivitt says, "You're coming up on blackout now, Gemini 5. Have a nice ride." Blackout to begin in 10 seconds. A minute or two into blackout, a computer on board should give the crew its first solution of the landing problem, it's evaluation, it's instructions on what angles to fly, and we suspect that it will agree very carefully with what has been plotted here.

END OF TAPE

Now comes the long quiet spell. They should be out of blackout in twenty minutes, thirty-five seconds, about three and a half minutes from now. This is time when the spacecraft comes to what must seem like a virtual halt on board from a speed of something over 17,000 miles an hour down to a speed around mock 1, 700-800 miles an hour, in a short span of several minutes. It's very quiet, almost a methodical approach here, in the Gemini Control Center, everyone seated listening for the communication. Jim McDivitt is broadcasting now in the blind at 18 minutes and 30 seconds since retrofire, but we've not heard back from the spacecraft yet, shouldn't for another two minutes. Jim McDivitt just put in another call 19 minutes and 20 seconds since retrofire. It's also all quiet from down range. We've had no reports in the last few minutes from the carrier, the Lake Champlain, but they will be coming to life, I'm sure, in a very few minutes. We're now at 20 minutes and 8 seconds since retrofire, and we estimate from 30-60 seconds they should be out of the blackout region. Their drogue chute presently is planned for an opening at 22 minutes, 5 seconds after retrofire followed by a minute and a half later they'll go to main chute. The drogue chute is to come out at 50,000 feet. Twenty-one minutes since retrofire.

END OF TAPE

Now we can hear Pete Conrad, his voice. It's very faint, but we can hear him. Jim McDivitt's final raised them. There he goes on another call. Pete Conrad says they are flying various bank angles, and he believes they may be a little bit short of the target. There's the drogue out, Pete called it. Pete called it at about 22 minutes, 10 seconds, and that's within 5 seconds of what we were planning here. They are on drogue. The carrier, we are informed, has radar contact with the spacecraft. Now the carrier is in voice contact with the spacecraft we're told. Gemini 5 communicator Jim McDivitt says, "Give us a call when you put your main out." Pete comes back with a roger. The main chute should be going out a second or two from now. "Roger," Pete says, "main chute out." He's on a main and he says it looks fine. Jim says that according to our radar information, they may be a little bit up range; we don't have a plot yet just where. They both report they are feeling fine. The precise word was, "We feel OK." The destroyer DuPont, as you can see, if you are look at a plot of that 121-1 area, is 72 nautical miles up range from the destroyer, from the carrier, I'm sorry. We hesitate to say, because we do not have any data yet on just where this point is, but the inclination seems to be that the landing point may be up around the DuPont. It's very likely somewhere between the DuPont and the Champlain. The on-scene commander down range has visual contact with the spacecraft. They are still on main chute. We have an estimated splash point here of 70 degrees, 15 minutes west, 30 degrees, 15 minutes north.

END OF TAPE

Gemini Control here. The radar contacts are pouring in at this point and we are able to give you a preliminary estimate that the spacecraft is floating on the water and they are on voice contact with an airplane called the Onscene Commander. We estimate this position about 80 miles west of the Carrier itself, west of the carrier Lake Champlain, this would be slightly to the South of the ground track and right now the best estimate is 80 miles west of the Carrier. We'll stand by and bring you additional information as it develops.

END OF TAPE

Gemini Control here. We have just been advised by the carrier, the On Scene Commander down there that an airplane, an HC-97 will be over the spacecraft in about 5 minutes and it will remain there until additional aircraft, helicopters, have reached the point. They are on the water and we say the best estimate right now is about 80 statute miles west of our original target point. This is Gemini Control standing by.

Gemini Control here. We just heard one of the cleaner transmissions we have heard in the last few minutes and it came from Gordon Cooper. He said Gemini V here. We're on the water and we're in good shape, standing by awaiting you sailors and you airplane people.

END OF TAPE

We still have no decision on just exactly what the crew will do, whether they'll sit it out there in the spacecraft and wait for the carrier to come along side, or whether they will go through a helicopter pick-up as we have in the two previous Gemini landi . Before this mission we planned for the crew to remain in the spacecraft to be physically hoisted aboard the carrier. However, in this...excuse me if this eighty mile estimate is accurate,that would mean about three hours, so that's a factor that has to be considered. This is Gemini Control standing by....

Gemini Control here. The recovery room was given the following briefing to the flight director. They estimate that we're--the spacecraft is down at a point twenty-two miles south of the destroyer Dupont. The on-scene air-borne commander is in the area over the spacecraft. He has directed three rescue helicopters to come to the scene, and they're proceeding at full throttle to that point. We have all good green reports from the spacecraft. All in all, it looks like a good situation down there with fairly low waves, good visibility--ten miles, and we'll stand by for additional information.

END OF TAPE

This is Gemini Control here. One of the rescue aircraft has the spacecraft in sight and he is on the scene. The recovery helicopters. three in number, are presently about 15 to 20 minutes away from the spacecraft and we have not got a decision back from the on-scene commander but we are recommending from here that we go ahead with the helicopter pickup and transfer the crew back to the carrier, Lake Champlain, via helicopter. We'll stand by for additional information as it develops. This is Gemini Control out.

END OF TAPE

Gemini Control here. The airplane air boss assures the on-scene commanders that he has the green dye markers that have been put out by the Gemini-5 spacecraft on splash, they have the dye markers in sight, letting down toward it. Now the space- ... air boss on-scene commander has the spacecraft clearly in sight.

END OF TAPE

This is Gemini Control. The swimmers, the pararescue men, members of the Air Rescue Service, are about to jump into the water in the area of the spacecraft and it appears right now that the spacecraft is resting on the 30° north latitude by about 69-1/2° west longitude. We're standing by. This is Gemini Control and our situation looks like this. The destroyer, Dupont, is 17 miles north of the spacecraft and is proceeding toward it. We have two swimmers that are poised and ready to go at the command of the on-scene commander who is also in the area in another aircraft. And we have three helicopters which should be there in a very few minutes. And the on-scene commander then must decide whether he wants to deploy his pararescue men or let the helicopters go in and make the pickup. In all probability, he will deploy his pararescue jumpers, but we'll stand by for the precise word.

END OF TAPE

Gemini Control here. Our status is this, the rescue aircraft is over the Gemini V spacecraft, and a decisi has been made not to jump the 2 para-rescue aboard, but instead to wait for the helicopters to arrive. They are expected within 10 to 15 minutes. They will have, they also have swimmers who will go into the water and fix a flotation collar about the spacecraft and then assist the crew in anyway they need assistance in leaving the spacecraft and going up the sling into the helicopters. This is Gemini Control.

END OF TAPE

Gemini Control here. The helicopters which are coming in on the site are estimating that they'll be over the spacecraft in about six or seven minutes from right now, and we'll put them over at about 20 minutes before the hour. The on-scene commander says that he can not see the reentry--the recovery antenna does not appear to be up, and he has not had any voice contact with the spacecraft. However, the carrier itself had voice contact as they approached the landing splashpoint, or very close to splash. We're standing by for additional information.

Gemini Control here. The recovery helicopter, search recovery helicopter, has been directed to proceed in on a pick-up pass and deploy its swimmers. The helicopter is commanded by Navy Commander Fredrick L. Highsmith of Nahunta, Georgia. They have three swimmers aboard the helicopter. They are Lt. J.G. John Hunt of Boston, Massachusetts, Quarter Master Third Class Peter A. Spencer, Stamford, Vermont, and William L. Langley, Airman--Navy Airman, of Greenville, South Carolina. This is Gemini Control standing by...

END OF TAPE

This is Gemini Control. From the airplane "Air Boss" the on scene commander, we learned that he is directing recovery helicopter number 1 to make an approach and go ahead and deploy it's swimmers. They should be jumping momentarily. We are also advised that in the same area there is a commercial ship, tentatively identified as the Victoria, under United States registry and it apparently just happened by and it's getting a pretty good eye view of the recovery pickup. This is Gemini Control standing by.

END OF TAPE

This is Gemini Control, one swimmer in the water, two swimmers in the water. A flotation collar has been dropped. All three swimmers in the water with the collar and they will inflate the collar and encircle the spacecraft with it.

The recovery helicopter pilot is now backing off a little bit so he doesn't make too much wake which would interfere with the swimmer operations, they are in the water now swimming around the spacecraft.

The swimmers are now beginning to put the flotation collar around the spacecraft. The report from the On Scene Commander is that the collar is now affixed to the spacecraft, and we are standing by for further word.

Gemini Control here. The swimmers are still putting the flotation collar around the spacecraft, securing it to it. We have a very clean signal from the On Scene Commander.

END OF TAPE

The one swimmer is up on the edge of the collar and he has signaled the recovery helicopter to drop the liferaft. Standard procedure, and the raft is now on the water. One of the swimmers now has plugged in an interphone communication patch on the spacecraft. The liferaft is now inflated beside the spacecraft. The swimmer who has been talking on that interphone connection just flashed a big "thumbs up" signal to the recovery helicopter. That's the report from down scene. A big thumbs up. We still have no reports yet on a hatch opening but we should have that momentarily.

We have a report, a hatch is open. The left hatch. The left hatch is now open we are advised by the On Scene Commander.

Now one astronaut is leaving the spacecraft at this time. That would most likely be Gordon Cooper. The astronaut is standing on the seat and one of the swimmers is chatting with him. Now we are advised that one of the astronauts who was standing on his seat has moved over. He is sitting on top of the spacecraft. And the astronaut gives us a big "thumbs up". He is giving a thumbs up sign to the On Scene Commander.

END OF TAPE

Now a second astronaut is standing up in his seat. He's talking to the swimmer. The first astronaut has entered the life raft; the second astronaut is walking around the flotation collar, apparently to make his jump into the life raft. Now the hatches on the spacecraft are being closed--a safety measure to avoid a wave splashing in there. The hatches are being closed and we're preparing to bring the astronauts up on the life lines. Still, one astronaut on the life raft; one astronaut is holding on to the spacecraft. We're preparing to hoist one of the astronauts--let's try to catch the signal live downrange.... Gemini Control here again. That signal from downrange is getting a little rough, but it certainly was good up to that point. The man who gave us that blow by blow is Commander Kenneth O. Echlin, Jr., who is Air Group Commander from Air Group 54. He's a native of Grimerton, Washington; he now lives in Key West, Florida. Now, the sling is being placed around the second astronaut. He's about to be hoisted in the recovery helicopter.

END OF TAPE

Gemini Control here. Now we have both astronauts in the recovery helicopter and that seemed to be a signal for Chris Kraft to break out his cigar box and he is passing them out to various people here in the Control Center. We do not have at this time a precise fix on when the helicopter is due back on the Lake Champlain, but we will stand by and give you that as it develops. We've got a report from the helicopter relayed to the On Scene Commander. He says that both the astronauts are looking pretty good, it sounds like they are a little bearded, but they are walking around in the helicopter, they seem to be in good spirits. He says they look good. We are standing by.

Now with the helicopter proceding toward the Lake Champlain, we are advised that it is moving a speed of 130 knots.

END OF TAPE

This is Gemini control here. We're advised through the relay that the astronauts have gone through their first medical check point. A simple stand up test, but best be described as a deep knee bend and it was entirely normal. We will keep you advised as additional information reaches us.

This is Gemini control. We're now estimating the helicopter will be on the deck of the Champlain at 36 minutes after the hour -- 36 minutes after the hour -- about a half hour from now. We're getting very good reports on the crew. They are minimal but they are certainly good reports. Meanwhile here at the control center, smiles and big cigars are the order of the day. Dr. Gilruth, Director of the Manned Spacecraft Center is congratulating Chris Kraft, the other two flight directors John Hodge and Gene Kranz are in the room along with Charles Mathews, the Gemini Program Manager. You can just feel the atmosphere relax in a round of hand shakes and cigar smoke. This is Gemini Control Center standing by.

END OF TAPE

This is Gemini Control. We've been passed two bits of information from the helicopters. The pilots inquired as to whether the gentleman who wanted the dollar bill is on board the carrier. This is a reference to the National Aeronautics Association representative who is on the carrier ready to certify this flight as the world's record for endurance, as well as several other record departments. They've also requested,the pilots that is, that they've advised that they will walk down to the sick bay area. They don't want any help--a very hopeful sign. We're estimating that the helicopter should land on the deck of the Champlain at 28 minutes after the hour, and we'll be back with you in a very few minutes.

Gemini Control here. From downrange we're advised that the search planes have given up the search for the reentry, the radar and reentry section. That's the forward nose of the spacecraft which we have sometimes recovered in past flights. We hoped to get it today, but apparently it sank. There's some question as to whether it had any of the cork material inside of it which would have kept it floating. We're also advised that the astronauts are going to come back aboard in their spacesuits. They have taken off their helmets, and we should see a furry and growthly beard. But they will still have their spacesuits on. This is Gemini Control standing by....

END OF TAPE

Gemini Control here. Trudy Cooper and her two daughters have just walked into the Control Center. Chuck Berry has his arm around her. They are both looking up at a big Videx presentation coming from the carrier, various shots of Pete and Gordo as they got out of the helicopter and walked across the deck. Deke Slayton, the assistant director for flight crew operations, is down congratulating Trudy, now chatting with her. We are sure she is going to make her way around the Control Center, restrained conversation if anything. Of course, it's been a long mission. Trudy has a big smile on her face. Now Deke Slayton is escorting Trudy and the girls across the Control Center up to Chris Kraft's console. Here we come now. Chuck Matthews, the Gemini program manager, shaking hands with Trudy now. Now Chris Kraft, the flight director, big cigar stuck in the side of his mouth--couldn't be happier. George Mueller, associate director for manned space flight, and Doctor Bob Gilruth, director of the Manned Spacecraft Center, just relaying their compliments to Trudy. Now we're not quite sure what's going on here. Chris is plugging in some head sets. Trudy's got one in her hand. A very few minutes ago we were going around the world, stopping at the individual stations, Kraft relaying a well done to each of the stations. In our other ear we are getting a report from sick bay that the boys look fine, from the doctor.

A very happy and smiling Jane Conrad approaching the Mission Control Center, and in quite a hurry to get to the third floor where Mrs. Gordon Cooper is already waiting.

Commentator — Mrs. Conrad, I know you are in a hurry to get to the third floor. What comment do you have at the moment?

Mrs. Conrad — Not right now.

Commentator — Not right now. She is in a hurry to get upstairs. Perhaps she is about to speak to her husband for the first time in at least eight days, Mrs. Jane Conrad with Bob Gordon of NASA Protocol, making their way to the elevators, and in just a few seconds they too will be up there in that third floor Mission Control room where Mrs. Trudy Cooper and the two daughters of Gordon Cooper are all ready there.

Commentator — This is Murphy Martin in the lobby of Mission Control.

END OF TAPE

In the midst of a lot of congratulations, we got additional word from the recovery forces that during that period they were on the water apparently there was some difficulty with their antenna. They were attempting to transmit, and either their on-the-water transmitter wasn't working or the antenna by which they do talk in that position was not in the up position. But that is not of very much concern at this point.

Jane Conrad has joined us here in the Control Center. She didn't bring the boys with her, however. Both wives seem very much absorbed in a picture where they are actually watching themselves on Chris Kraft's monitor at that center console which has been the scene of numerous conferences these past 8 days, I can assure you.

Gemini Control here again. The circuits are being checked out right now. We hope momentarily to arrange a little conference call between the wives and the pilots out on the Lake Champlain. We have released a certain circuit for that purpose. It is being checked out by the communicator. We have no estimate on exactly when this call will take place. Now Jane Conrad has taken Chris Kraft's seat at the console and another chair is being pulled up for Trudy Cooper. The two Cooper girls, Cam and Jan are busy in a private conversation all of their own. Now chairs are being brought up for them.

END OF TAPE

President Johnson I want to salute you both for the very calm and cool courage that you have shown throughout these last 8 days. In the face of disappointments and discouragements, you have conducted yourselves nobly. You have certainly proved for once and all that man has a place in the exploration of the great frontier of space. Gordon, when are you going to be ready to go up again?

Cooper Well in a day or two, sir. As soon as we can have a little to eat and a little rest.

President Johnson Well that's fine. Astronaut Conrad, after you see that family of yours, would you like to see some of the world at ground level for a change?

Conrad I'm sorry sir. I couldn't hear you.

President Johnson I say after you see that family of yours, how would you like to see some of the world at the ground level for a change?

Conrad Oh, I'd like to very much, sir.

President Johnson Well, you are going to get the chance. We want you to take a good rest and work with your doctors and follow out Mr. Webb and Dr. Seamans instructions, but afterwards, we hope that both of you, along with the other astronauts can accept some of the invitations to share your achievements with the people in other lands, because the one thing that we are all working for and really our only

purpose in space is peace in the world. We want all mankind to be the beneficiaries of what you have done. And I know that you can continue to communicate Americas message on Earth as in the skies. We spent a good part of last evening working out some plans for you. Now Gemini V will long be remembered and long honored for the courage of the crew and the competence of the team on the ground and the vision of all who dared to see this great interprise. We can only hope that your achievement will encourage all other nations to accept more fully what great accomplishments can be wrought by cooperating together in these new realms of infinity. So I just want to say God bless you both, we're glad you are back, we shall be everlastingly proud of you and we are so thankful for all the blessings that are ours. Do either of you have any observations you want to make?

Cooper — No, no sir. It was certainly a wonderful trip and we saw a lot of the whole world, a lot of countries and a lot of places that were extremely interesting and it makes you feel how small and insignificant man is compared to a country or the world and how we all should work together to further .....(garbled)

President Johnson — Well Gordon, we wish you could be out here with us this morning.

President Johnson Gordon, do you read me!

Cooper Yes sir, we are reading you.

President Johnson Are you just reluctant or did you not hear me?

Cooper We are reading you. Are you reading us?

President Johnson I sure am. I wish you could go the the Short Horse with me this morning as we did not long ago.

Cooper That would be nice.

President Johnson We'll be looking forward to seeing you and congratulations again and I know that those families are going to be mighty happy to see you again.

Cooper Thank you, thank you very much for calling us.

President Johnson Over and out.

Cooper We'll see you, bye.

END OF TAPE

Gemini Control here. Gemini Control here. Our ground communications haven't worked out nearly as well as our space communications in the last eight days, but in the last five minutes both Trudy Cooper and Jane Conrad talked with their husbands as well as the two girls, out on the carrier. We understand that the patch did not work out so that that particular conversation failed to get out, but it was a very abortive sort of a conversation. They had great difficulty hearing the carrier, and apparently the boys had difficulty hearing them. However, they did relay their congratulations both ways, and the girls are now leaving the Control Center, presumably to go back home. Trudy had told Gordo that she would see him in about four days, and apparently Jane Conrad has other ideas. She said that it might not be that long. This is Gemini Control out.

END OF TAPE